DDV Gold Ltd
a 100% owned subsidiary of
Atlantic Gold

FOCUS REPORT
TOUQUOY GOLD PROJECT
MOOSE RIVER GOLD MINES, NOVA SCOTIA

Prepared For:
DDV Gold Limited

APPENDICES

NOVEMBER 2007
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APPENDIX A

MINISTER OF ENVIRONMENT AND LABOUR'S DECISION AND FOCUS REPORT TERMS OF REFERENCE

Nova Scotia

Department of Environment & Labour

PO Box 697
Halifax, Nova Scotia
B3J 2T8

Our File Number:

10700-40

Office of the Minister

original dated April 10, 2007

Wally Bucknell
Executive Director
DDV Gold Limited
6749 Moose River Road
RR# 2 ,
Middle Musquodoboit, NS B0N 1 X0

Dear Mr. Bucknell:

The environmental assessment of the proposed Touquoy Gold Project has been completed.

This letter is to advise that, pursuant to Section 13 (1)(c) of the *Environmental Assessment Regulations*, I have determined 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.

Numerous public comments were submitted during the review concerning project impacts to the undeveloped lands, lakes and river systems lying to the south-west of the project site. This area has been described by Nova Scotia Environment and Labour's Protected Areas Branch as having unrepresented ecosystems, significant ecosites, outstanding wilderness recreational values, and a large natural patch with a significant connectivity zone for wildlife.

The focus report shall 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. Particular attention shall 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. This 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 report should demonstrate that these concerns have been considered in mine design.

The Environmental Assessment Administrator will provide a written terms of reference for the preparation of the focus report within 25 days. DDV Gold Ltd. will have up to one year

to submit the required number of hard copies, for distribution by NSEL, and an electronic copy of the focus report. The Environmental Assessment Branch will notify the public of the release of the focus report and as a result a 30 day public review period will commence.

It is recommended that DDV Gold Ltd. work with Nova Scotia Environment and Labour's Protected Areas Branch and other stakeholders in preparing the focus report.

Sincerely,

original signed by

Mark Parent
Minister

cc: Julie Towers, Acting Manager - Environmental Assessment

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.

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.

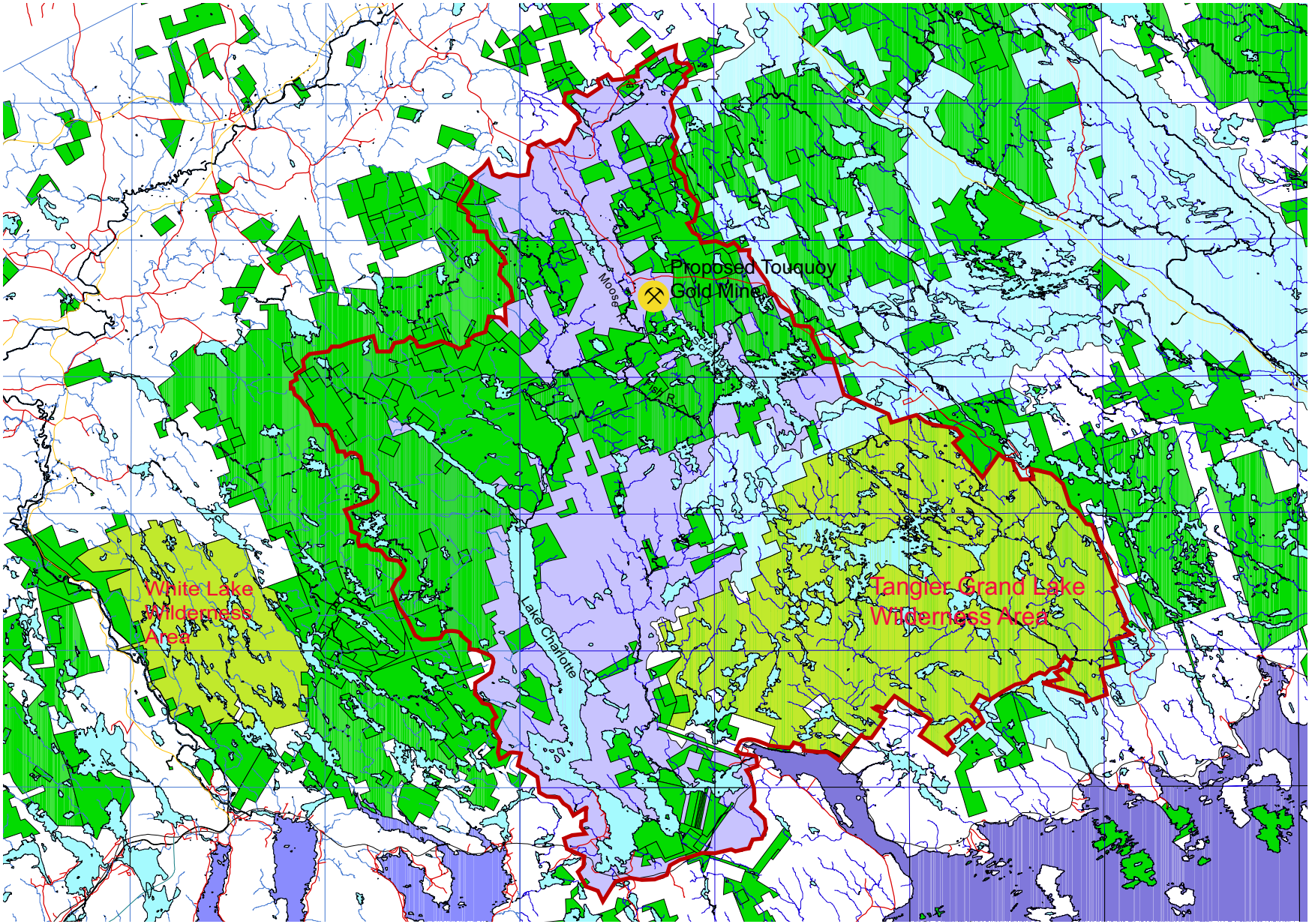
Describe contingency plans to address accidental releases that could impact the study area.

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



APPENDIX B

INTERNATIONAL CYANIDE MANAGEMENT CODE

INTERNATIONAL CYANIDE MANAGEMENT INSTITUTE

The International Cyanide Management Code

www.cyanidecode.org

September 2006

The International Cyanide Management Code (hereinafter "the Code") and other documents or information sources referenced at *www.cyanidecode.org* are believed to be reliable and were prepared in good faith from information reasonably available to the drafters. However, no guarantee is made as to the accuracy or completeness of any of these other documents or information sources. No guarantee is made in connection with the application of the Code, the additional documents available or the referenced materials to prevent hazards, accidents, incidents, or injury to employees and/or members of the public at any specific site where gold is extracted from ore by the cyanidation process. Compliance with this Code is not intended to and does not replace, contravene or otherwise alter the requirements of any specific national, state or local governmental statutes, laws, regulations, ordinances, or other requirements regarding the matters included herein. Compliance with this Code is entirely voluntary and is neither intended nor does it create, establish, or recognize any legally enforceable obligations or rights on the part of its signatories, supporters or any other parties.

SCOPE

The Code is a voluntary initiative for the gold mining industry and the producers and transporters of the cyanide used in gold mining. It is intended to complement an operation's existing regulatory requirements. Compliance with the rules, regulations and laws of the applicable political jurisdiction is necessary; this Code is not intended to contravene such laws.

The Code focuses exclusively on the safe management of cyanide that is produced, transported and used for the recovery of gold, and on cyanidation mill tailings and leach solutions. The Code originally was developed for gold mining operations, and addresses production, transport, storage, and use of cyanide and the decommissioning of cyanide facilities. It also includes requirements related to financial assurance, accident prevention, emergency response, training, public reporting, stakeholder involvement and verification procedures. Cyanide producers and transporters are subject to the applicable portions of the Code identified in their respective Verification Protocols.

It does not address all safety or environmental activities that may be present at gold mining operations such as the design and construction of tailings impoundments or long-term closure and rehabilitation of mining operations.

The term "cyanide" used throughout the Code generically refers to the cyanide ion, hydrogen cyanide, as well as salts and complexes of cyanide with a variety of metals in solids and solutions. It must be noted that the risks posed by the various forms of cyanide are dependent on the specific species and concentration. Information regarding the different chemical forms of cyanide is found at *www.cyanidecode.org/library/cyanide facts/cyanide chemistry*.

CODE IMPLEMENTATION

As it applies to gold mining operations, the Code is comprised of two major elements. The Principles broadly state commitments that signatories make to manage cyanide in a responsible manner. Standards of Practice follow each Principle, identifying the performance goals and objectives that must be met to comply with the Principle. The Principles and Practices applicable to cyanide production and transportation operations are included in their respective Verification Protocols. Operations are certified as being in compliance with the Code upon an independent third-party audit verifying that they meet the Standards of Practice, Production Practice or Transport Practice.

For implementation guidance, visit *www.cyanidecode.org/thecode/implementationresources*

The programs and procedures identified by the Code's Principles and Standards of Practice and in the Cyanide Production and Transportation Verification Protocols for the management of cyanide can be developed separately from other programs, or they can be integrated into a site's overall safety, health and environmental management programs. Since operations typically do not have direct control over all phases of cyanide production, transport or handling, gold mines that are undergoing Verification Audits for certification under the Code will need to require that other entities involved in these activities and that are not themselves Code signatories commit to

and demonstrate that they adhere to the Code's Principles and meet its Standards of Practice for these activities.

This Code, the implementation guidance, mine operators guide, and other documents or information sources referenced at *www.cyanidecode.org* are believed to be reliable and were prepared in good faith from information reasonably available to the drafters. However, no guarantee is made as to the accuracy or completeness of any of these other documents or information sources. The implementation guidance, mine operators guide, and the additional documents and references are not intended to be part of the Code. No guarantee is made in connection with the application of the Code, the additional documents available or the referenced materials to prevent hazards, accidents, incidents, or injury to employees and/or members of the public at any specific site where gold is extracted from ore by the cyanidation process. Compliance with this Code is not intended to and does not replace, contravene or otherwise alter the requirements of any specific national, state or local governmental statutes, laws, regulations, ordinances, or other requirements regarding the matters included herein. Compliance with this Code is entirely voluntary and is neither intended nor does it create, establish, or recognize any legally enforceable obligations or rights on the part of its signatories, supporters or any other parties.

PRINCIPLES AND STANDARDS OF PRACTICE

1. PRODUCTION **Encourage responsible cyanide manufacturing by purchasing from protective manufacturers who operate in a safe and environmentally manner.**

Standard of Practice

1.1 Purchase cyanide from manufacturers employing appropriate practices and procedures to limit exposure of their workforce to cyanide and to prevent releases of cyanide to the environment.

2. TRANSPORTATION **Protect communities and the environment during cyanide transport.**

Standards of Practice

2.1 Establish clear lines of responsibility for safety, security, release prevention, training and emergency response in written agreements with producers, distributors and transporters.

2.2 Require that cyanide transporters implement appropriate emergency response plans and capabilities, and employ adequate measures for cyanide management.

3. HANDLING AND STORAGE Protect workers and the environment during cyanide handling and storage.

Standards of Practice

3.1 Design and construct unloading, storage and mixing facilities consistent with sound, accepted engineering practices and quality control and quality assurance procedures, spill prevention and spill containment measures.

3.2 Operate unloading, storage and mixing facilities using inspections, preventive maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.

4. OPERATIONS Manage cyanide process solutions and waste streams to protect human health and the environment.

Standards of Practice

4.1 Implement management and operating systems designed to protect human health and the environment including contingency planning and inspection and preventive maintenance procedures.

4.2 Introduce management and operating systems to minimize cyanide use, thereby limiting concentrations of cyanide in mill tailings.

4.3 Implement a comprehensive water management program to protect against unintentional releases.

4.4 Implement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions.

4.5 Implement measures to protect fish and wildlife from direct and indirect discharges of cyanide process solutions to surface water.

4.6 Implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of ground water.

4.7 Provide spill prevention or containment measures for process tanks and pipelines.

4.8 Implement quality control/quality assurance procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specifications.

4.9 Implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and ground water quality.

5. DECOMMISSIONING Protect communities and the environment from cyanide through development and implementation of decommissioning plans for cyanide facilities.

Standards of Practice

5.1 Plan and implement procedures for effective decommissioning of cyanide facilities to protect human health, wildlife and livestock.

5.2 Establish an assurance mechanism capable of fully funding cyanide-related decommissioning activities.

6. WORKER SAFETY Protect workers' health and safety from exposure to cyanide.

Standards of Practice

6.1 Identify potential cyanide exposure scenarios and take measures as necessary to eliminate, reduce and control them.

6.2 Operate and monitor cyanide facilities to protect worker health and safety and periodically evaluate the effectiveness of health and safety measures.

6.3 Develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.

7. EMERGENCY RESPONSE Protect communities and the environment through the development of emergency response strategies and capabilities.

Standards of Practice

7.1 Prepare detailed emergency response plans for potential cyanide releases.

7.2 Involve site personnel and stakeholders in the planning process.

7.3 Designate appropriate personnel and commit necessary equipment and resources for emergency response.

7.4 Develop procedures for internal and external emergency notification and reporting.

7.5 Incorporate into response plans monitoring elements and remediation measures that account for the additional hazards of using cyanide treatment chemicals.

7.6 Periodically evaluate response procedures and capabilities and revise them as needed.

8. TRAINING Train workers and emergency response personnel to manage cyanide in a safe and environmentally protective manner.

Standards of Practice

8.1 Train workers to understand the hazards associated with cyanide use.

8.2 Train appropriate personnel to operate the facility according to systems and procedures that protect human health, the community and the environment.

8.3 Train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide.

9. DIALOGUE Engage in public consultation and disclosure.

Standards of Practice

9.1 Provide stakeholders the opportunity to communicate issues of concern.

9.2 Initiate dialogue describing cyanide management procedures and responsively address identified concerns.

9.3 Make appropriate operational and environmental information regarding cyanide available to stakeholders.

CODE MANAGEMENT

Administration

The International Cyanide Management Institute ("The Institute") is a non-profit corporation established to administer the Code through a multi- stakeholder Board of Directors consisting of representatives of the gold mining industry and participants from other stakeholder groups. For additional information on the Institute, see: www.cyanidecode.org/theinstitute.

The Institute's primary responsibilities are to:

- Promote adoption of and compliance with the Code, and to monitor its effectiveness and implementation within the world gold mining industry.
- Develop funding sources and support for Institute activities.
- Work with governments, NGOs, financial interests and others to foster widespread adoption and support of the Code.

- Identify technical or administrative problems or deficiencies that may exist with Code implementation, and
- Determine when and how the Code should be revised and updated.

Code Signatories

Gold mining companies with either single or multiple operations, and the producers and transporters of cyanide used in gold mining can become signatories to the Code; the signature of an owner or corporate officer of the operating company is required. By becoming a signatory, a company commits to follow the Code's Principles and implement its Standards of Practice, or in the case of producers and transporters, the Principles and Practices identified in their respective Verification Protocols. Code signatories' operations will be audited to verify their operation's compliance with the Code.

When becoming a signatory, a gold mining company must specify which of its operations it intends on having certified. Only those cyanide production and transportation facilities that are related to the use of cyanide in gold mining are subject to certification. A company that does not have these operations audited within 3 years of signing the Code will lose its signatory status. See: www.cyanidecode.org/signatories&certifiedoperations.

Code Verification and Certification

Audits are conducted every three years by independent, third-party professionals who meet the Institute's criteria for auditors. The audit is considered to be complete, and the three-year period before the next audit must be conducted begins, on the day the Institute takes formal certification action based on the auditor's findings. Auditors evaluate an operation to determine if its management of cyanide achieves the Code's Principles and Standards of Practice, or the Production or Transport Practices for these types of operations. The Code's Verification Protocols contains the criteria for all audits. Operations must make all relevant data available to the auditors, including the complete findings of their most recent independent Code Verification Audit, in order to be considered for certification.

During an initial verification audit, an operation's compliance at the time of the audit will be evaluated. Subsequent re-verification audits will also evaluate compliance during the period between the preceding and current audits.

Upon completion of the audit, the auditor must review the findings with the operation to ensure that the audit is factually accurate and make any necessary changes. The auditor must submit a detailed "Audit Findings Report" addressing the criteria in the Verification Protocol and a "Summary Audit Report" that includes the conclusion regarding the operation's compliance with the Code to the signatory, the operation and to the Institute. The operation is certified as complying with the Code if the auditor concludes that it is in full compliance with the Code's Principles and Standards of Practice or its Principles and Practices for cyanide production or transportation. The detailed "Audit Findings Report" is the confidential property of the operation and shall not be released by the Institute in any fashion without the express written consent of the signatory and audited operation. The "Summary Audit Report" of certified operations will be

made available to the public on the Code website. The operation may submit its comments regarding the Summary Audit Report to the Institute, which will be posted along with the Summary Audit Report on the Institute's website.

Operations that are in substantial compliance with the Code are conditionally certified, subject to the successful implementation of an Action Plan. Substantial compliance means that the operation has made a good-faith effort to comply with the Code and that the deficiencies identified by the auditor can be readily corrected and do not present an immediate or substantial risk to employee or community health or the environment. Operations that are in substantial compliance with a Standard of Practice, Production Practice or Transport Practice must develop and implement an Action Plan to correct the deficiencies identified by the verification audit. The operation may request that the auditor review the Action Plan or assist in its development so that there is agreement that its implementation will bring the operation into full compliance. The Action Plan must include a time period mutually agreed to with the auditor, but in no case longer than one year, to bring the operation into full compliance with the Code. The Auditor must submit the Action Plan to the Institute along with the Audit Findings Report and Summary Audit Report.

The operation must provide evidence to the auditor demonstrating that it has implemented the Action Plan as specified and in the agreed-upon time frame. In some cases, it may be necessary for the auditor to re-evaluate the operation to confirm that the Action Plan has been implemented. Upon receipt of the documentation that the Action Plan has been fully implemented, the auditor must provide a copy of the documentation to the Institute along with a statement verifying that the operation is in full compliance with the Code.

All operations certified as in compliance with the Code will be identified on the Code website, *www.cyanidecode.org/signatories&certifiedoperations*. Each certified operation's Summary Audit Report will be posted and operations with conditional certification will have their Summary Audit Report and their Action Plan posted.

An operation cannot be certified if the auditor concludes that it is neither in full compliance nor in substantial compliance with any one of the Standards of Practice (or Production or Transport Practice). An operation that is not certified based on its initial verification audit can be verified and certified once it has brought its management programs and procedures into compliance with the Code. Its signatory parent company remains a signatory during this process.

A gold mining operation that is not yet active but that is sufficiently advanced in its planning and design phases can request *pre-operational conditional certification* based on an auditor's review of its site plans and proposed operating procedures. An on-site audit is required within one year of the operation's first receipt of cyanide at the site to confirm that the operation has been constructed and is being operated in compliance with the Code.

A gold mining operation or an individual cyanide facility at an operation is no longer subject to certification after decommissioning of the cyanide facilities. A producer or transporter is no longer subject to certification after it no longer produces or transports cyanide for use in the gold mining industry.

Certification Maintenance

In order to maintain certification, an operation must meet all of the following conditions:

- The auditor has concluded that it is either in full compliance or substantial compliance with the Code.
- An operation in substantial compliance has submitted an Action Plan to correct its deficiencies and has demonstrated that it has fully implemented the Action Plan in the agreed-upon time.
- There is no verified evidence that the operation is not in compliance with the Code.
- An operation has had a verification audit within three years.
- An operation has had a verification audit within two years of a change in ownership, defined as a change of the controlling interest of the operating company.

Auditor Criteria and Review Process

The Institute has developed specific criteria for Code Verification auditors and will implement procedures for review of auditor credentials. Auditor criteria includes requisite levels of experience with cyanidation operations (or chemical production facilities or hazardous materials transport, as appropriate) and in conducting environmental, health or safety audits, membership in a self-regulating professional auditing association and lack of conflicts of interest with operation(s) to be audited.

Dispute Resolution

The Institute has developed and implemented fair and equitable procedures for resolution of disputes regarding auditor credentials and certification and/or de-certification of operations. The procedures provide due process to all parties that may be affected by these decisions.

Information Availability

The Code and related information and code management documentation are available via the Internet at www.cyanidecode.org. The website is intended to promote an understanding of the issues involved in cyanide management and to provide a forum for enhanced communication within and between the various stakeholder groups with interest in these issues. The website is the repository for Code certification and verification information.

ACKNOWLEDGEMENTS

This project was underwritten by a group of gold companies and cyanide producers from around the world. The Gold Institute was instrumental in organizing this financial and technical support and provided the administrative and logistical support necessary to successfully complete the project. This effort represents the first time that an industry has worked with other stakeholders to develop an international voluntary industry Code of Practice.

The individuals listed below participated in the process. Participation by these individuals does not necessarily represent an endorsement of the Code by their respective organizations.

Steering Committee

Harold Barnes (Chairman)[1]	Homestake Mining Company, United States
Stephen Bailey	International Finance Corporation, United States
Julio Bonelli	Government of Peru
Gordon Drake, Ph.D[2]	WMC Resources, Ltd., Australia
John den Dryver[3]	Normandy Mining Limited, Australia
Bill Faust	Eldorado Gold Company, Canada
Fred Fox[4]	Kennecott Minerals Company, United States
John Gammon, Ph.D.	Government of Ontario, Canada
Steven Hunt[5]	United Steelworkers of America, Canada
Juergen Loroesch, Ph.D.	Degussa, Germany
Basie Maree	Anglogold Company, South Africa
Glenn Miller, Ph.D.	University of Nevada, Reno, United States
Anthony O'Neill	WMC Resources, Ltd., Australia
Michael Rae	World Wide Fund For Nature, Australia
Stan Szymanski	International Council of Chemical Associations, United States
Stephan Theben[6]	European Commission, Spain
Federico Villasenor[5]	Minas Luismin, Mexico
Juergen Wettig	European Commission, Belgium

[1] Elected Chairman by the Steering Committee
[2] Substituted for Anthony O'Neill at Washington and Vancouver Meetings
[3] Substituted for Anthony O'Neill at Santiago Meeting
[4] Replaced Bill Faust on Committee after Napa Meeting
[5] Added to Steering Committee at Vancouver Meeting
[6] Substituted for Juergen Wettig at Washington, Vancouver and Santiago Meetings

Code Manager

Norman Greenwald	Norm Greenwald Associates, United States

Secretariat

Wanda Hoskin	United Nations Environment Programme, France
Tom Hynes, Ph.D.	International Council on Metals and the Environment, Canada
Kathryn Tayles	United Nations Environment Programme, France

Gold Institute

Paul Bateman	The Gold Institute, United States

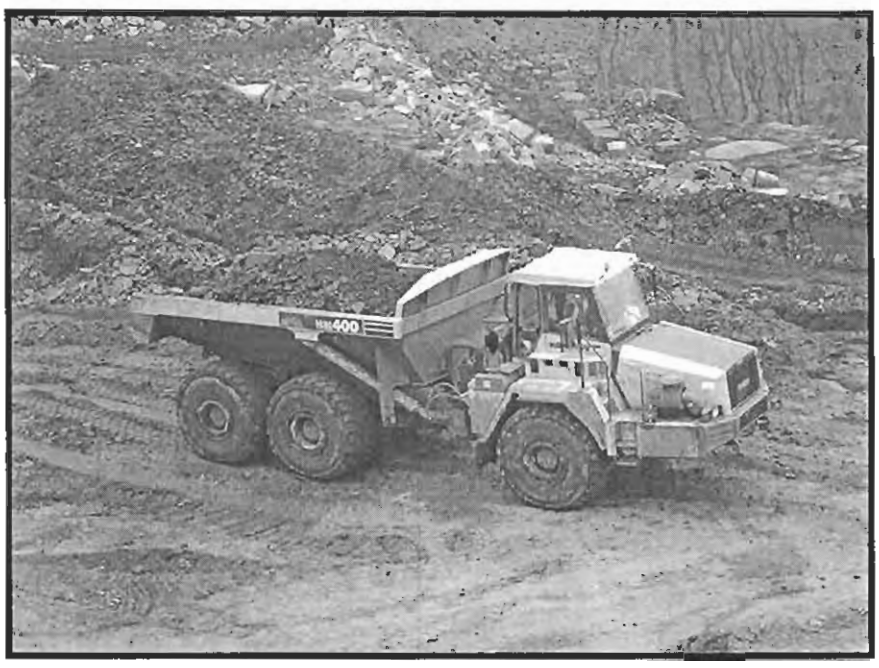
Industry Advisory Group

Anglogold, South Africa	Homestake Mining Company, United States
Ashanti Goldfields Company, Ghana	Kinross Gold Corp., Canada
Australian Gold Council, Australia	Lihir Management Corp., Paupa New Guinea
Australian Gold Reagents, Australia	Mining Project Investors, Australia

Barrick Gold Corp., Canada
Degussa, Germany
Dupont, United States
Glamis Gold, Ltd., United States
Gold Fields Limited, South Africa
The Gold Institute, United States
Newmont Gold Company, United States
Normandy Mining, Australia
Placer Dome, Inc., Canada
South African Chamber of Mines, South Africa
Rio Tinto, United Kingdom
WMC, Australia

APPENDIX C

EFFLUENT TREATMENT DESIGN REPORT



CBCL Final Report 070836

Prepared for:

Atlantic Gold

Touquoy Gold Effluent Treatment Facilities

Preliminary Engineering Study

October 2007

CBCL LIMITED
Consulting Engineers

ISO 9001
Registered Company

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Chapter 1 **Introduction**

1.1 Background

DDV Gold (DDVG) Limited proposes to undertake a surface gold mine and reclamation project at Moose River Gold Mines in Halifax County, Nova Scotia. The project undertaking involves the operation of a surface mine to excavate gold-bearing ore, and on-site processing facilities.

Emissions from the mine site activities during construction and operation will include tailings effluent. Tailings effluent will be strictly monitored through the mandatory federal Metal Mining Effluent Regulations (MMER). All effluent associated with processing of the ore will be treated through a dedicated cyanide destruction circuit, which will destroy more than 95% of the residual cyanide, prior to direction to the tailings pond. Cyanide will undergo further attenuation via natural degradation effected by oxidation, hydrolysis and sunlight in the tailings pond with final retention and monitoring in the polishing pond to ensure that the quality of water released into the natural drainage meets MMER specifications under the federal Fisheries Act.

Heavy metal concentrations (copper, lead, zinc and nickel) in the tailings solution are expected to meet MMER specifications upon discharge from tailings impoundment with the exception of arsenic. A dedicated effluent treatment plant between the tailings dam and the polishing pond will reduce arsenic to acceptable levels from the tailings water.

1.2 Study Scope and Objectives

The objective of this study is to provide a feasibility study for the design and cost estimates of the effluent treatment plant. The design loading rates will be developed from the pre-feasibility study and new treatability tests. The dimensioning of treatment units will be completed and cost estimates updated to reflect the current status of the design.

Chapter 2 **Process Description**

2.1 Design Basis

The Effluent Treatment (ET) system is designed to treat water in excess of process recycle requirements for the removal of suspended solids and dissolved arsenic, and to adjust the pH so it can be safely discharged into Scraggy Lake. The system is designed to meet MMER effluent discharge requirements for suspended solids, arsenic, base metals, and pH.

2.1.1 Contaminant Loading

The contaminant loading for the proposed mine works was developed previously in reports prepared in support of the Environmental Assessment Registration process. Tailings will be discharged to the TMF year-round, resulting in a maximum of approximately 2.5 M m^3 of water requiring treatment annually. In a typical year discharge would be 1.5 M m^3. Treatment and discharge of excess water will only be conducted for 8 months of the year to allow the polishing pond(s) to be drained for cleaning and to provide additional surge capacity in the event of higher than expected flows during spring thaw. While the water balance performed has been utilized, some adjustment of contaminant loads has been made based on information collected since the registration process was completed. The design parameters utilized for the effluent treatment plant described in this study are provided in Table 2.1.

Table 2.1 Effluent Treatment Design Parameters

Parameter	Concentration
Nominal Flow (m^3/h)	350
Peak Flow (m^3/h)	450
Arsenic (mg/L)	2.0
Iron (mg/L)	2.0
TSS (mg/L)	100
Total CN^- (mg/L)	1.0

2.1.2 Effluent Objectives

The effluent requirements for the project are consistent with the federal Metal Mining Effluent Regulations. The effluent treatment plant utilizes treatment processes that have been proven to be able to meet these regulations. In addition to designing these treatment processes at typical design loads, we have facilitated bench scale tests for arsenic removal to confirm the proposed treatment processes. In many cases these have demonstrated potential effluent concentrations well below the design limits for the project. The effluent requirements are provided in Table 2.2. The bench scale testing results are discussed in Chapter 3 of this report.

Table 2.2 Effluent Requirements and Objectives

Parameter	MMER Maximum Concentrations (Monthly Average)	MMER Maximum Concentrations (Grab Sample)
Arsenic (mg/L)	0.5	1.0
Copper (mg/L)	0.3	0.6
Total CN^- (mg/L)	1.0	2.0
Lead (mg/L)	0.2	0.4
Nickel (mg/L)	0.5	1.0
Zinc (mg/L)	0.5	1.0
TSS (mg/L)	15	30
Radium 226 (Bq/L)	0.37	1.11

2.2 Process Description

The effluent treatment processes occurring at the Tailings Management Facility (TMF) includes natural degradation of cyanide, precipitation of dissolved and suspended arsenic solids, and co-precipitation of cyanide-metal complexes. This study focuses on treatment following the cyanide-degradation process, including the precipitation of dissolved arsenic and arsenic occurring in suspended solids in the tailings water. Arsenic occurs at the Touquoy Project site in ore and waste rock as well as runoff from mine water and natural watercourses.

A process flow diagram for the proposed treatment process is provided in Figure 2.1. As indicated in the diagram, tailings pond overflow will be pumped sequentially into Tank 1, Tank 2, the Sludge Pond and the Polishing Pond. Ferric sulphate will be added to the tailings water for the formation of the highly insoluble "basic ferric arsenates", of the general composition $FeAsO_4 xFe(OH)_3$. A coagulant will be added to the water discharged from Tank 2, to help bind the precipitates together and hence improve the settling within the ponds. Lime will be added to Tank 1, and if required, Tank 2 to neutralize the acidity resulting from the hydrolysis of the ferric iron. If necessary, hydrogen peroxide will be added to the precipitation tanks to oxidize arsenite to arsenate.

2.2.1 Influent Flow Measurement and Control

Water from the TMF will be routinely pumped to the processing facility. A separate pressurized line will tee off of the return line to supply the TMF effluent requiring treatment. The flowrate of water into the plant from the TMF will be controlled with an actuated flow control valve. A magnetic flowmeter will be used to set the flowrate, record accumulated volumes of overflow from the TMF, and to control operation of the chemical metering

APPENDIX D

TAILINGS DAM DESIGN DOCUMENT

Golder Associates Ltd.

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Telephone: (905) 567-4444
Fax: (905) 567-6561

REPORT ON

TOUQUOY GOLD PROJECT
FEASIBILITY STUDY
TAILINGS DISPOSAL FACILITY
NOVA SCOTIA

Submitted to:

Atlantic Gold
Suite 701
220 Pacific Highway
Crows Nest, NSW, 2065
Australia
Attention: Peter Carter
General Manager Operations

DISTRIBUTION:

3 Copies - Atlantic Gold
2 Copies - Golder Associates Ltd.

May 2007 06-1118-041C

Golder Associates Ltd.

2390 Argentia Road
Mississauga, Ontario, Canada L5N 5Z7
Telephone: (905) 567-4444
Fax: (905) 567-6561

May 28, 2007 06-1118-041C

Atlantic Gold
Suite 701
220 Pacific Highway
Crows Nest, NSW, 2065
Australia

Attention: Peter Carter

RE: TAILINGS DISPOSAL FACILITY
FEASIBILITY DESIGN REPORT,
TOUQUOY GOLD PROJECT, NOVA SCOTIA

Dear Sirs:

The attached is our report on the Feasibility level design of the Touquoy Tailings Facility. Additional geochemical work is currently being carried out and this will be reported on separately along with further input into treatment requirements. A separate report will also be provided on the geotechnical investigation carried out for the tailings area.

We trust that the report meets with your expectations. If you wish to discuss any aspect of the report please do not hesitate to contact members of the study team.

Yours very truly

GOLDER ASSOCIATES LTD.

Irwin Wislesky, P.Eng.
Associate

IW/KB/dh

Attachments: As noted in the Table of Contents
Distribution: As noted on the cover page

n:\active\2006\1118\06-1118-041c- atlantic gold touquoy project\report\final report-march and may-07\06-1118-041c final rpt feasibility study may07.do

EXECUTIVE SUMMARY

Golder Associates Ltd. (Golder) was retained by Atlantic Gold (Atlantic) to carry out a feasibility study for their Touquoy Gold Mining Project covering conceptual design/basic engineering for Tailings Disposal and Water Management. Plant Geotechnical was also part of the scope and was reported on separately.

The Touquoy Gold deposit is located approximately 60 km northeast of Halifax in the Moose River Gold Mines district in Halifax County, Nova Scotia, Canada as shown on Figure 1. The proposed site will occupy an approximate footprint of 320 ha. The Touquoy site is mainly characterized by low-relief and hummocky topography.

Mining will involve the extraction of ore from an open pit operation using conventional truck and shovel with an anticipated mine life of about 5.1 years and a mill capacity of 4,500 tpd. Currently, the Touquoy property has resources amenable to open pit mining of 7.6 Mt grading 1.6 g/t (Atlantic, 2006).

The project description indicates that gold will be removed from the ore in a process involving the following two stages: gravity concentration and carbon-in-leach (CIL) procedure (Atlantic, 2006). Tailings produced during process with be detoxified using the INCO SO_2/Air procedure before being deposited as a slurry at approximately 50% solids into the tailings management facility (TMF).

The work carried out by Golder included a geochemical assessment of the expected waste materials and tailings to determine the reaction products and to enable establishing a means to control potential detrimental environmental effects.

Based on acid-base accounting results received to date, waste rock and marginal ore units on the whole are considered to be non-acid generating; however the tailings have some potential to generate acidity.

Arsenic is the main parameter of concern for the Touquoy project and untreated dissolved concentrations have the potential to exceed relevant effluent and receiving water environmental criteria.

The tailings slurry, although sent through a cyanide destruct process, will contain some residual cyanide.

For this study, the annual precipitation for the 100 year wet case has been used to set the dam crest elevations. Any storm in excess of the 100 year wet will be allowed to spill over the emergency spillway that will be designed to handle the routed probable maximum flood (PMF).

Several options were evaluated for the location of the tailings facility and waste rock dumps prior to the final site selection. The selected location was primarily chosen because it had the least potential effect on existing natural water courses.

The design criteria for the Touquoy Tailings Containment Facility are based on the Canadian Dam Association (CDA) Draft Safety Guidelines (September 2006). Based on these guidelines, the dams are considered to be classified as high hazard based on the potential hazards that can occur if a breach were to occur.

The Tailings Management Facility was designed utilizing the following design criteria:

- The facility should contain both a 100 year return period wet precipitation year and a 100 year storm event on top of spring melt conditions.
- The facility and spillways should be able to safely pass a probable maximum flood (PMF) event for the area (493 mm in a 24 hour period).
- The containment dams should have a minimum factor of safety of 1.5 under static conditions.
- The containment dams should have a minimum factor of safety 1.0 under dynamic (earthquake) loading conditions.
- Seepage from the facility should be within mine effluent discharge parameters for the province.

To meet the design criteria the facility must be capable of retaining 7.3 Mt of tailings solids and allow for appropriate management of water entering the facility. To provide this, the facility has been designed with the following:

- A low permeability perimeter containment dam,
- A tailings distribution system which will allow beach building and optimum space utilization within the facility,
- A perimeter ditch to collect seepage,
- Internal rockfill dykes to control the placement of tailings and allow for better water management,
- A decant tower and pump system to regulate the water within the tailings pond by allowing for recycle needs and treatment of water prior to discharge to the environment,
- A treatment plant for water in excess of recirculation needs, and
- A Polishing Pond for settlement of precipitate and final water quality assessment prior to discharge to the environment.

The tailings containment dams will be constructed in stages to provide flexibility to the system and spread construction costs over the life of the facility.

A site wide flow model/water balance was carried out to aid in determining the water management needs with respect to flood control, seepage control, recirculation and treatment.

The topography at the dam locations at Touquoy are amenable for conventional, zoned, water retaining embankment dams with central water retaining cores founded on stiff clay or grouted bedrock. This is a proven method for embankment dam construction at mine sites across Canada.

The primary construction materials for the dams will be rockfill and clay till sourced locally from the open pit and surrounding areas.

Both stability and seepage analyses were carried out for the design of the containment dams.

An instrumentation and monitoring program will be established to ensure that the facility is functioning as designed and to assist operations personnel.

At this time, the anticipated scenario for closure of the facility is that exposed tailings beaches will be covered with a water shedding cover such as compacted clay placed over the exposed tailings beaches and then revegetated. There will be no need to hold back water for cyanide degradation, thus little to no water will be held within the tailings area. The spillway invert will be lowered within the tailings pond to allow free flow of runoff out of the facility once treatment is considered no longer necessary.

Erosion protection against wind and runoff will be provided on exposed surfaces. The erosion protection will be clean mine rock that will be appropriately stockpiled for this purpose during the operating period.

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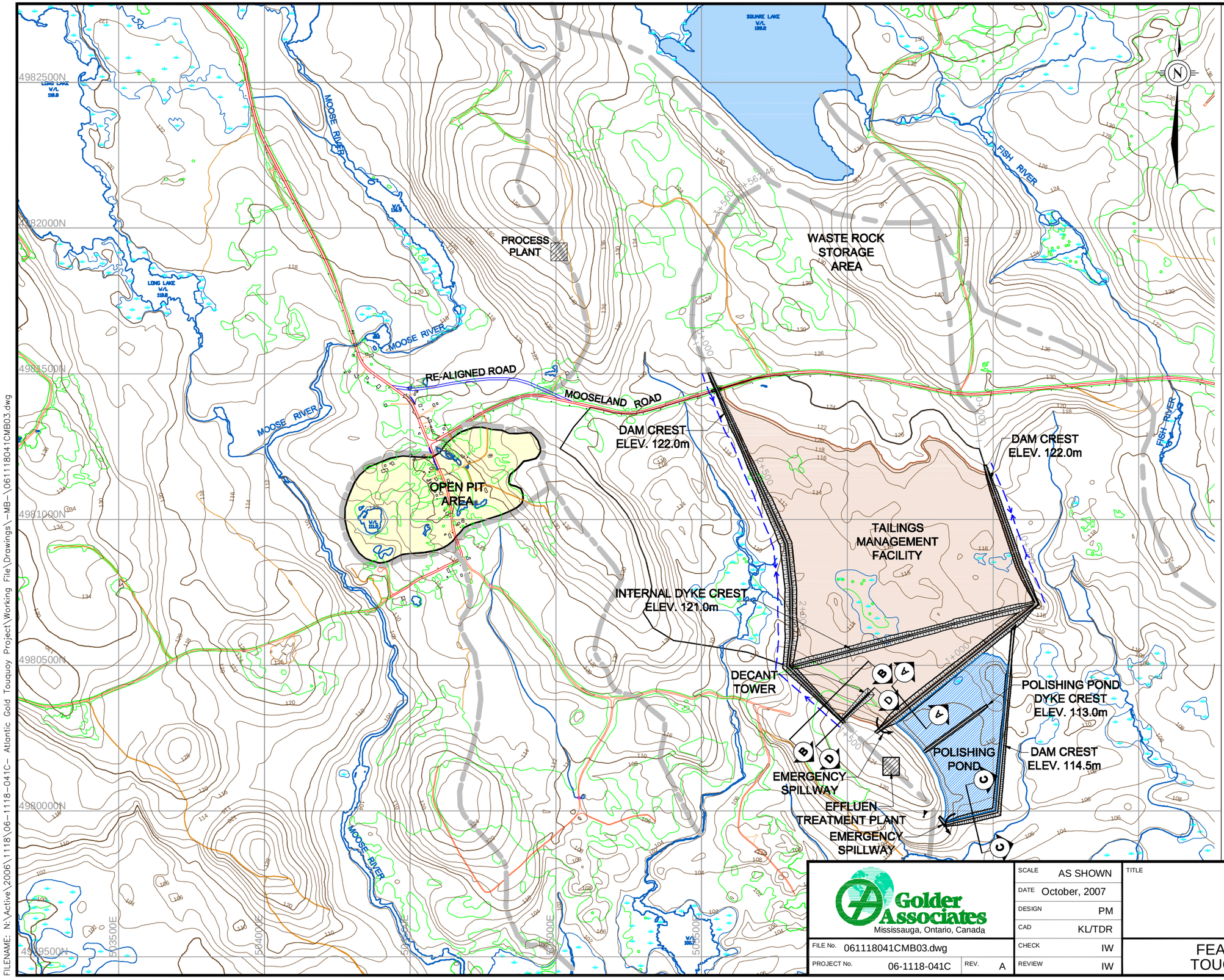

LEGEND:

- OPEN PIT AREA
- PROPOSED TAILINGS AREA
- PROPOSED POLISHING POND
- PROPOSED DAM
- EXISTING PAVED PUBLIC ROAD
- RE-ALIGNED PAVED ROAD
- LOGGING ROAD
- WATERSHED BOUNDARY
- DIVERSION DITCH

NOTE:

1. CONTOUR INFORMATION PROVIDED BY ATLANTIC GOLD.
2. CONTOUR INTERVAL IS 2m.
3. ALL DIMENSIONS AND ELEVATIONS ARE IN METRES.

REFERENCES:

Atlantic Gold Ltd.
Moose River Gold Mines
Ortho Scale-2000/2m
Photo-2003/10,000
Datum/Proj-NAD83/UTM - ZONE 20
Compiled by: Atlantic Air Survey Limited

125 0 125 250 500
SCALE 1:12,500 METRES

Golder Associates
Mississauga, Ontario, Canada

FILE No.	061118041CMB03.dwg
PROJECT No.	06-1118-041C
REV.	A
SCALE	AS SHOWN
DATE	October, 2007
DESIGN	PM
CAD	KL/TDR
CHECK	IW
REVIEW	IW

TITLE

LOCATION PLAN (STAGE 1)

FEASIBILITY STUDY
TOUQUOY PROJECT

FIGURE 3

PLOT DATE: October 12, 2007
FILENAME: N:\Active\2006\1118\06-1118-041C- Atlantic Gold Touquoy Project\Working File\Drawings\-MB-\061118041CMB03.dwg

APPENDIX E

FUGITIVE DUST MANAGEMENT PLAN

FUGITIVE DUST CONTROL PLAN

TOUQUOY GOLD PROJECT
DDV GOLD LIMITED
MOOSE RIVER GOLD MINES, NOVA SCOTIA

Prepared By:

DDV Gold Limited

OCTOBER 2007

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1.0 PROJECT DESCRIPTION

The Touquoy Gold Project involves the development of a 4,500 tpd surface gold mining operation at the community of Moose River Gold Mines. The project facilities include an open pit, process plant, waste rock stockpile, and tailings management facility (TMF).

The weather conditions at site classified as "temperate maritime". Precipitation averages 1350 mm annually with the majority falling as rain. Temperatures are moderate, evaporation not excessive, and humidity moderate to high. Winds are light to moderate typically from the NW or SE at 5-15 kph.

The host rock is argillite and minor greywackes and as such is not high silica. Hydrogeology is characterized by a high water table and local surface flows resulting in numerous small watercourses, bogs, and wetlands. The open pit will be developed down through historic mine workings which are flooded and will drain into the open pit.

Total measured and indicated resources total 7.6 Mt ore grading 1.6 g/t containing 390,000 oz of gold. An additional inferred resource of 2.9 Mt mineralized material grading 1.6 g/t containing an additional 150,000 oz also exists within the open pit boundaries. Total mineable resources are expected to be 10.5 Mt ore grading 1.6 g/t containing 540,000 oz.

Mining will be conducted at a rate of 4.5 Mtpa or nominally 13,000 tpd. Mining will be a typical drill/blast, load/haul truck-shovel operation employing four (4) 50t haul trucks and one (1) primary hydraulic excavator of 65t class (4 m3). Excavation will be in 5 m benches. A rotary blasthole drill will drill off patterns of 50-100 holes to be shot daily, 5 days per week. Blasting will employ ANFO, plastic liners in wet holes, and non-electric initiation.

Blasthole assays will be used to distinguish ore and waste. Strip ratio is 2:1 (w:o). Waste is hauled about 1 km to the Waste Rock Stockpile for storage. Ore is hauled about 750 m to the ROM (Run-of-Mine) Pad where it is either direct dumped into the crusher or stockpiled for blending by a loader.

Operations are planned to be conducted over a period of 5-7 years processing 1.5 Mtpa. Gold recovery will employ three-stage crushing to 9 mm and ball milling to P80 150 µm. 50% of the gold will be extracted by gravity concentration and the remainder by carbon-in-leach (CIL) technology. Fine gold is taken into solution with sodium cyanide and

then adsorbed onto granulated carbon before elution, electro-winning, and on-site smelting.

CIL tailings are detoxified with an SO2/Air process before transfer to the tailings facility via an 800 m HDPE dual-contained pipeline. Tailings are stored in an impoundment formed by a 16 m high clay-core, rockfill dam. Process water is reclaimed from the impoundment for reuse. Excess water is treated and discharged.

The operation will employ 150 people; 70 in mining, 50 in processing, and 30 in management and support functions. Operations will run 24/7 year-round. The site is relatively remote with no permanent residents living within 5 km of site once development begins.

2.0 PLAN OBJECTIVES

The Fugitive Dust Control Plan describes the control measures and practices to be employed to minimize and control fugitive dust. The plan is based on five principles:

- Problem identification
- Design mitigation
- Operating mitigation
- Monitoring and reporting
- Corrective action

The goal of the plan is to provide a framework for management of fugitive dust that will enable the operation to eliminate or mitigate its effects in order to protect worker safety and that of the surrounding environment. To meet this goal, the Fugitive Dust Control Plan has the following objectives:

- Identify fugitive dust emission sources
- Describe primary and contingent control measures and practices
- Explain inspection and observation procedures
- Establish reporting requirements
- Detail corrective action
- Define training issues

Identification of fugitive dust emission sources will be accomplished by a thorough review of the proposed operating plan. Primary and contingent control measures will be established by addressing each source of emissions with industry standard methods which constitute best practice. Inspection and observation procedures will provide feedback as to the effectiveness of mitigation measures and the need for corrective action. Reporting will provide the basis for corrective action and, if necessary, amending control measures. Training will be focused on hazard recognition, taking corrective action, and implementing procedure properly.

3.0 FUGITIVE EMISSIONS SOURCES

Fugitive dust can be generated in any of five areas on the project site. These are the open pit, waste rock stockpile, process plant, tailings facility, and service complex. A description of the sources of fugitive dust in each area follows.

3.1 OPEN PIT

Dust is generated by the various unit operations involved in mining. Drilling can generate dust from the ground up rock that forms the cuttings. Blasting creates dust during detonation. Dust can be generated during excavation of dry muck and subsequent loading into trucks. Dozing and grading material on bench floors and roads will generate dust in dry conditions. Ditches and sumps may become a source of dust if they fill with fines and dry out.

3.2 WASTE ROCK STOCKPILE

Dust can be generated on the waste rock stockpile by the unloading of trucks and the pushing of waste material to create each working lift. The haul road to the waste dump from the open pit is also a potential source of dust from haul trucks and other mobile equipment moving along its length.

3.3 PROCESS PLANT

Dust can be generated at the process plant in three distinctly different areas. When ore is hauled to the ROM pad, dumping in the ore stockpile or crusher dump pocket can generate dust in a similar manner to that which occurs on the waste rock stockpile. The loader on the ROM pad can generate dust while tramming ore to the crusher or cleaning off the grizzly.

The crushing circuit generates dust as the blasted rock is reduced from P80 600 mm to P80 9mm during 3-stage crushing. Dust occurs at conveyor transfer points, the sizing screens, and during discharge onto the crushed ore stockpile. Dust can also occur when feeders draw ore from under the crushed ore stockpile to the reclaim conveyor which feeds the ball mill.

Lastly, dust can be generated during the mixing of bulk reagents, in particular, lime, caustic, copper sulphate, and sodium meta-bisulphite. Also, dust may result during carbon regeneration when fine carbon is exhausted from the carbon regeneration kiln.

3.4 TAILINGS FACILITY

Dust may occur at the tailings facility when the dam is being raised with waste material. The process of raising the dam is exactly the same as constructing the waste rock stockpile and uses the same material from the open pit. Roads around the facility may be subject to dust generation if they dry out. The tailings beach can become a source of fine dust in windy conditions if the surface becomes dry in summer or winter.

3.5 SERVICE COMPLEX

Dust may be generated on the service complex access road, in the site parking lot, and maintenance yard. The preparation of samples in the assay laboratory will also result in the creation of dust during crushing, pulverizing, and bucking.

4.0 OPERATING PRACTICES AND CONTROL MEASURES

The following describes the primary and contingent control measures to be employed to manage fugitive dust at the project. Primary control measures generally focus on prevention through design of physical or operating systems, for example, a dust collection system. Contingent control measures are directed towards mitigation of fugitive dust and rely more on operating procedures. It should be recognized that the prevailing wet climate will be highly effective in suppressing dust in all outdoor areas.

4.1 OPEN PIT

Each unit operation in the mining process which moves earth or rock has the potential to generate dust. Drilling will employ a water spray suppression system to control dust on each drill rig. The annulus of each blasthole will be shrouded by a rubber dust curtain which hangs down from the drill deck and prevents cuttings from blowing away.

Blasting will utilize the cuttings from each hole for stemming which will be loaded within 24 hours of drilling. "Choke" blasting will be employed to minimize material movement for grade control purposes. This will also reduce the amount of dust generated during a blast. Blasts will be limited to 50-100 holes also reducing dust generated. Most of the dust from blasting will be > 30 μm in size and will fall to earth within the confines of the open pit. Oversize will be broken with a hydraulic hammer eliminating the dust that would result from secondary blasting.

The open pit is relatively small so generating excessive broken inventory that could be a source of wind blown dust prior to loading will not occur. The muck (broken rock) will be high moisture at $\geq$ 5% and a size distribution of P50 > 150 mm. The high inherent moisture and relatively coarse nature will reduce dust generation during handling. Maximum bench height is 5 m and excavation may be conducted in 2.5 m lifts if required for grade control purposes. The low bench height will minimize dust generated during loading as material sloughs down the working face.

Loading of trucks will ensure that payload is centred with adequate freeboard to avoid spillage. Excavators and loaders will place material in truck boxes to avoid excessive fall when filling trucks. Standing water on bench floors will be drained into the muckpile whenever possible to wet material prior to loading.

Haul roads in and out of the pit will be watered as required to prevent dust generation. Mine water used for dust suppression will be clarified prior to use to prevent spreading silt which will make roads slippery and will generate more dust when roads dry.

Vehicle speeds will be limited to a maximum of 50 kph which will also limit dust generation.

Bench floors and haul roads will be constructed of material containing minimum fines. Capping will be competent granular material which doesn't easily break down into fines. Potholes and puddles will be repaired and drained so that they do not become a source of dust when they dry out. Sumps and ditches will be cleaned out regularly so that they too do not create a source of fines that can result in dust generation.

4.2 WASTE ROCK STOCKPILE

The haul road and working platforms on the waste rock stockpile will be watered and maintained in the same way as the roads and benches in the pit. Mud and material containing organics will be stockpiled separately and will not be used to construct travel surfaces as they have poor bearing strength and will generate dust when they dry.

Only the active working lift on the stockpile will be exposed. As each lift is completed it will be re-sloped, covered with topsoil, and re-vegetated. Given this procedure, regardless of stockpile height, only 10 m will be exposed to serve as a potential dust source.

4.3 PROCESS PLANT

Activities on the ROM pad will manage dust in a similar manner to the open pit. The haul road to the ROM pad and the platform surface will be constructed of low-fines, competent granular material. The surface will be watered to suppress dust and maintained to minimize fines generation.

The ROM stockpile will be only 5 m high and will store any given ore for no more than three weeks at a time. The constant inflow of moist material from the pit and rehandle to the crusher will ensure that the pile doesn't dry out and become a major dust source. The ROM pad loader tramming ore to the crusher will travel at low speed and will take care to avoid spillage that could be tracked by haul trucks onto roads causing dust.

The crusher dump pocket will not be covered and so will get the benefit of precipitation to suppress dust. Water sprays will be employed at the dump pocket if required and at the sizing screens. Fines will bypass primary crushing to maximize throughput and minimize unnecessary generation of dust. Conveyor transfer points will be enclosed where practical. The individual components of the crushing circuit will be mounted on

truck frames positioned 1.3 m off the ground on concrete slabs. This will facilitate regular, mechanized clean up of spillage and fines from belt scrapers. Fines from the crushing circuit clean-up will be wetted and reprocessed.

The 9 mm product of crushing will be conveyed to the crushed ore stockpile. The stockpile will be housed in a steel-frame, fabric covered building to protect the material from freezing, wind, and precipitation. The building will be equipped with ventilation and filters to prevent the exhaust of dust into the surrounding atmosphere. The pile will be wetted as necessary to facilitate work within the building. All dust generated is expected to remain within the confines of the storage building.

Ore will be reclaimed from the crushed ore stockpile by feeders beneath the pile. This arrangement will prevent surface dust generation. Dust in the reclaim tunnel itself will be exhausted by ventilation and passed through filters prior to release. The reclaim tunnel will be washed daily to clean-up fines. Washing will maintain a high humidity in the tunnel that will tend to suppress airborne dust.

Bulk lime handling will be accomplished pneumatically. Lime will be blown into a silo from the delivery truck and then transferred to mixing by sealed auger. Sodium cyanide will be supplied in steel, reusable, sealed "Flo-bins" which discharge directly into the mix tank preventing the release of any fugitive dust.

All other bulk reagents are either liquid (HCL, ferric sulphate, hydrogen peroxide) or will be supplied in 1t bulk bags which are emptied into mix tanks via an enclosed bag breaker station equipped with dust collection. All clean-up in the mill will be by washing or loading of wetted material with the skid-steer loader. Sweeping will only be permitted for minor clean-up.

4.4 TAILINGS FACILITY

Roads at the tailings facility will be watered and maintained in the same manner as roads elsewhere on the site. The tailings beach will remain wetted by frequent changes to the tailings discharge point to prevent dusting. Dewatering of sludge from the treatment ponds will be done to ensure that the surface does not dry out and become a source of contaminated fugitive dust. As the surface dries out the material will be capped with coarse rock.

4.5 SERVICE COMPLEX

The site access road and parking lot will be watered and maintained in the same manner as roads elsewhere on the site. The locations where haul trucks cross the paved public road to the waste rock stockpile and ROM pad will be washed as required to prevent dirt and mud being tracked onto the pavement.

Environmentally friendly (cellulose-based) binding agents may be applied to light vehicle traffic areas to stabilize surface material and prevent dust generation. The parking lot fence with employ a fabric environmental barrier to prevent dust generated in the service complex from blowing into surrounding areas. In all areas of the site, bands of trees will remain to provide a natural barrier to view, noise, and dust.

The sample preparation area in the laboratory will be equipped with dust collection and exhaust fans to manage the dust generated during pulverizing, and bucking of blasthole samples.

5.0 INSPECTION AND REPORTING

Formal inspections of working areas will be conducted monthly by management and employee representatives of the Occupational Health and Safety Committee (OHSC). Monthly inspections will also be conducted by each shift supervisor in each respective area. Lastly, observations are to be made each shift regarding dust conditions.

The inspections will use the principles and objectives of the Fugitive Dust Management Plan as a guide. The course of inspections will adhere to the following pattern:

- Review dust management practices for the area
- Conduct physical inspection
- Identify any sources of fugitive dust not being effectively managed
- Recommend existing corrective action
- Suggest alternatives if existing practice ineffective
- Determine if additional resources are required
- Establish accountability for corrective action
- Document inspection finding in report form
- Submit report for review and to enable follow up

OHSC inspection reports will be circulated at the general management level. Shift supervisor reports will be circulated at the department management level. Observations made each shift will be recorded in the shift log book along with corrective action taken and any other pertinent information. Shift supervisors and department managers will be responsible for addressing recognized fugitive dust issues in cooperation with the Health, Safety and Environment Department which will serve as a technical resource to operating groups.

Inspections will also be conducted in conjunction with quarterly and annual air quality dust monitoring to ensure that measurements can be related to prevailing conditions at the time.

6.0 TRAINING

An integral part of the implementation of the Fugitive Dust Control Plan is appropriate training for the personnel involved. Training with regard to fugitive dust management will involve (1) hazard recognition, (2) personal safety practice, and (3) job specific task training.

Hazard recognition training will teach the employee what the sources of fugitive dust are, how to recognize them, and the nature of appropriate primary and contingent controls. Personal safety practice will teach an employee correct behaviors to avoid exposure to and effects of fugitive dust. These would include the use of personal protective equipment, washing rather than sweeping, actions to take to avoid exposing oneself to a high dust environment.

Job specific task training would teach personnel how to manage fugitive dust issues that may affect them in the course of performing their specific job functions. For example, a water truck driver would learn the frequency to water roads, correct application procedure to maximize dust suppression without creating other hazards, and the importance of using clarified mine water. A grader operator would be taught the importance of proper drainage and the need to use select material in construction to avoid the excessive generation of fines by traffic.

Basic knowledge of fugitive dust issues and the responsibility of each employee to report occurrences will be imparted during initial employment orientation. Safety meetings conducted every four days will be the most used forum to discuss how crews can employ best practice to manage fugitive dust in the workplace.

APPENDIX F

1/200 YEAR STORM DESIGN MEMO

TECHNICAL MEMORANDUM

Golder Associates Ltd.
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TO:	Mr. Peter Carter – DDV Gold Ltd.	**DATE:**	August 28, 2007
FROM:	Pedram MolkAra, Irwin Wislesky	**JOB NO:**	06-1118-041C
EMAIL:	pmolkara@golder.com; iwislesky@golder.com		
RE:	**TECHNICAL MEMORANDUM ON WATER BALANCE STUDY – TOUQUOY PROJECT – DDV GOLD LTD. (ATLANTIC GOLD)**		

This technical memorandum presents a summary of the most recent water balance analysis for the Touquoy Project near Halifax, Nova Scotia.

The water balance for the Touquoy project was initially carried out to determine the volume of the internal pond within the Tailings Management Facility (TMF) under wet, normal and dry annual conditions with a return period of 100 years. The result of the 100 year wet return period was compared with the result of precipitation under the normal annual precipitation condition plus the 100 year, 24 hour storm event. The 100 year wet return period produced a larger internal pond volume. It was therefore decided to base the design of the TMF dam crests on the 100 year wet return period condition and not the single storm event.

In an email request received from Mr. Peter Carter on 23rd of August, 2007, Golder was asked to find out the impact of a 1 in 200 year, 24 hour storm event and compare it with the initial design condition (100 year wet return period). The results for the current analysis and previous analyses are presented in Table 1.

The maximum internal pond volume is controlled by some major factors including the amount of natural runoff, water released from the tailings and the amount of water that is pumped to the treatment facility each month. In the design, the amount of water that enters the system through natural runoff depends on the precipitation condition or return period that has been selected. The treatment rate has been adjusted to maintain a minimum volume of about 500,000 m^3 of water in the internal pond.

The current TMF design was based on a maximum internal pond volume of 1.37 M-m^3. A comparison of the three options presented in Table 1indicates that 1.37 M-m^3 still represents the highest internal pond volume. It can therefore be concluded that the current design (100 yr. wet return period) provides adequate storage for the 24 hour, 200 year storm event under normal annual precipitation conditions without adjustment of the dam crest or spillway elevations.

Table 1 also shows that the 200 year storm event in comparison with the 100 year storm event will produce about 19,000 m^3 more water, which will not have any major impact on the current TMF design.

We trust that this technical memorandum provides sufficient detail to support the precipitation conditions considered in the design. Please let us know if you require further details or would like to discuss the results in more detail.

PM/IW/dh

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TABLE 1
Normal Year and 100 Year Wet Return Period Comparison

Precipitation Condition / Return Period	Annual Precipitation (mm)	Total Effluent Pumped to Treatment Facility (M-m³/yr)	Maximum Internal Pond Volume Prior to Storm (M-m³)	Storm Event Precipitation (mm)	Runoff Volume due to Strom Event (M-m³)	Maximum Internal Pond Volume (M-m³)
Normal Year + 100 Year Storm Event	1,348	1.53	1.15	152	0.20	1.35
Normal Year + 200 Year Storm Event	1,348	1.53	1.15	166	0.22	1.37
100 Year Wet (Current Design)	1,839	2.23	1.37	-	-	1.37

Notes:
1. The storm events don't apply to the current design of 100 year wet return period.
2. The maximum internal pond volume occurs in the month of April which is the start of the spring melt season.
3. In order to design the dam crest elevations it has been assumed that tailings will be deposited horizontally and covered with water.

APPENDIX G

CONTAINMENT CELL DESIGN REPORT

Report No. 072473

Prepared for:
Atlantic Gold

Touguoy Mine Project

Disposal of Sludge from The Mine Tailing Water Treatment Plant

September 2007

CBCL LIMITED
Consulting Engineers

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Appendices

A Sketches

Chapter 1 **Introduction**

CBCL Limited is pleased to provide the following concept for the permanent disposal of sludge from the mine tailing water treatment plant (WTP) for the Touguoy Mine project. Generally the concept for the disposal of sludge consists of construction of a 20,000m^{3}containment cell in increments of 2,500m^3 as capacity is required.

The capacity includes provision for 3,000m^3 for post mine closure WTP sludge and another 5,000m^3 of storage capacity for wastes from historic mining activities in the area, as well as 9,500m^3 of storage for the five year operational period of the mine. An additional capacity of 15% is added as a contingency to bring the total capacity of the cell is 20,000m^3. Based on a storage depth of the sludge at 2.0m, the cell is approximately 135m by 275m, with a footprint area of 3.5 hectares. The estimated cost for the containment cell is $1,082,250.

It may be possible to reduce overall footprint of the cell by increasing the sludge depth and efficiently using the detailed survey information of the site to develop the most efficient cell design. It is also possible that the actual volume required may be less than the 20,000 m^3 volume estimate. These reductions depend on a number of factors; most notably, the actual bearing capacity and consolidation characteristics of the sludge, and the volume of sludge generated from the water treatment requirements after the mine is closed.

There are a number of standards pursuant to the design and operation of disposal facilities. Notable guidelines include the CCME National Guidelines for Hazardous Waste Landfills and the Nova Scotia Municipal Solid Waste Guidelines. Both of these were used in the development of the basic concept for the containment cell. However, given the location of the proposed containment, immediately up gradient of the tailings basin and water treatment plant, and down gradient of the coarse waste rock pile; rather than developing a standalone cell in a green field area, the cell was incorporated within the overall development plan of the site to reduce or eliminate impacts.

For example, a standalone water treatment plant for the containment cell is not planned. Instead, water generated from the containment cell is directed to the tailings basin and ultimately the water treatment facility located immediately down gradient of the containment cell.