### NEWMONT GHANA GOLD LTD. AHAFO SOUTH PROJECT

## COMPLETION AUDIT TERMS OF REFERENCE

**ENVIRONMENTAL, HEALTH, AND SAFETY** 

#### **BACKGROUND**

Newmont Ghana Gold Ltd. (NGGL) has developed gold reserves at the Ahafo Project in the Brong Ahafo Region of Ghana, West Africa. The Ahafo Project is located along a mineralized zone (Ahafo Project area) that extends approximately 70 kilometers (km) in the central portion of Ghana.

The Ahafo Project is a gold mining and milling operation with a current expected mine-life of 15 years. Construction of the Ahafo Project initiated during the first quarter of 2005 and mine operations start-up occurred in early third quarter 2006. Newmont sought financial assistance from the International Finance Corporation (IFC) to continue development of the Project. In addition, Newmont is applying IFC social and environmental safeguards and control requirements to the design, construction, operation, and closure of the Ahafo South Project. The project pre-dates the 2006 IFC Performance Standards and therefore the older IFC Policies and Guidelines are applicable.

IFC involvement and financing required both substantial pre-finance project due diligence and is requiring post-finance project assurance related to the various social, environmental, and Health and Safety IFC Safeguard Policies relevant to the project.

General Terms of Reference were developed in March 2006 to identify the key focus areas for External/Independent Social, Environmental, and Health and Safety compliance monitoring, schedules and reporting requirements. This work is ongoing. The schedule included in this work requires separate Completion Audits for the Social and the EHS areas. The Environmental and Health and Safety (EHS) Completion Audit will focus on the commitments shown in the Environmental and Social Action Plan (ESAP) as updated in April 2006 (see Annex A). Separate Terms of Reference are being developed for the Social Completion Audit.

These Completion Audit Terms of Reference (CATOR) are specifically for the EHS Completion Audit. The original General Terms of Reference remain in place for ongoing regular monitoring.

#### **EXTERAL/INDEPENDENT COMPLETION AUDIT GUIDANCE**

NGGL committed to external/independent environmental, and health and safety compliance monitoring in order to provide an additional level of transparency to the implementation of environmental and health & safety management programs.

The specific IFC Safeguard Policies and standards which have formed the basis for the ongoing external/independent compliance monitoring are summarized below and are also presented in the Environmental and Social Impact Assessment which was disclosed on August 29, 2005. Specific IFC Safeguard Policies are described in detail on the IFC Website <a href="http://www.ifc.org/ifcext/enviro.nsf/Content/Safeguardpolicies">http://www.ifc.org/ifcext/enviro.nsf/Content/Safeguardpolicies</a>.

**Disclosure Policy (1998)**: IFC is open about its activities and welcomes input from affected communities, interested members of the public, and business partners and will seek out opportunities to explain its work to the widest possible audience. This policy was developed in recognition of the importance of accountability and transparency in the development process.

**OP 4.37 – Safety of Dams (September 1999 draft)**: IFC requires that dams be designed and constructed by experienced and competent professionals. For dams that are over 15 meters high, and dams between 10 and 15 meters that present special design complexities, IFC requires reviews by an independent expert, preparation of detailed plans, and periodic safety inspections. The policy covers mine tailing dams as well as water storage dams.

**Open Pit Mining/Milling (1995):** The open pit mining and milling guidelines describe requirements for tailing disposal, liquid effluent discharge, and air pollution control (including workplace air quality compliance). In addition, other general requirements are included for erosion and sediment control, development of a mine reclamation plan, sewage sludge and solid waste disposal management, workplace noise, confined space, hazardous material handling and storage, sanitation, worker safety, employee training, and record-keeping and reporting.

World Bank Environment, Health and Safety Guidelines (1995): These guidelines for mining and milling at open pit mines include information for tailings disposal, liquid effluents, ambient and workplace air quality, erosion and sediment control, mine reclamation, sewage sludge disposal, solid waste disposal, workplace noise, work in confined spaces, hazardous material handling and storage, general health and safety, training, and record keeping and reporting.

**General Environmental Guidelines (1998)**: For financed projects in which no other specific environmental guidelines have been developed, general environmental guidelines may be used. These guidelines emphasize pollution prevention, and are intended to minimize resource consumption, including energy use, and to eliminate or reduce pollutants at the source. General Environmental Guidelines include requirements for air emissions, liquid effluents, hazardous chemicals and wastes, solid wastes, and ambient noise.

**Hazardous Materials Management Guidelines (2001)**: Requirements of this guideline include screening to determine characteristics and threshold quantities for hazardous materials, development of a Hazardous Materials Management Program, and community involvement and awareness.

**IFC Environmental Guidelines for Occupational Health and Safety (2001)**: This guideline covers general aspects of occupational health and safety and would be supplemented, as needed, with the appropriate national or international standards. Under this guideline, an Occupational Health and Safety Management System are required. Such a system would require provisions for ensuring an organizational framework to support the occupational health and safety program, a hazard prevention program, performance monitoring, and evaluation.

#### **EXTERNAL/INDEPENDENT COMPLETION AUDIT APPROACH**

The external/independent completion audit is primarily intended to achieve the following.

 Confirm compliance or non-compliance with the IFC's Safeguard Policies and Guidelines listed above and the project's ESAP (relevant extracts are contained in Annex A).

- Provide practical guidance and advice to the projects' internal field teams on how to solve any remaining problems identified. To identify areas and degrees of compliance or non-compliance with the applicable IFC Policies & guidelines as presented above.
- Identify specific issues and/or conduct follow-up and closure of issues identified in previous regular compliance monitoring visits.

The external independent completion audit will be conducted by international social, environmental and health and safety experts as discussed in the section titled "Consultant Selection." Should it prove necessary to replace these experts, suitable replacements will be agreed upon between NGGL and IFC. The completion audit is scheduled for late 2009 (ideally late November). At that point in time, a determination will be made by NGGL and IFC, based on recommendations from the external monitors on the future frequency of external reports for the project's lifetime.

#### **Environmental Focus Areas**

- Environmental and Social Action Plan (April 2006 update see Annex A).
- Environmental management system performance.
- Environmental compliance (Ghanaian and International Standards as presented in ESIA).
- IFC Environmental Safeguard Policies.
- Facility review. Note
- Associated facility review.
- Onsite/Off-site Biodiversity Management Plan performance (as appropriate).

#### **Health and Safety Focus Areas**

- Health and Safety management system performance.
- Health and Safety compliance (Ghanaian and International Standards as presented in ESIA).
- IFC Health and Safety Safeguard Policies.
- Facility review.

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NGGL is required to retain an independent engineer for regular ongoing review of facilities specified under OP 4.37. The independent Social, Environment and Health and Safety completion audit consultant is not required to review geotechnical details provided an independent engineer is conducting the review. If an independent engineer is conducting this review, the independent engineering reports will be provided to the independent completion audit consultant for review and inclusion in their report.

Hazardous Material and Transportation management.

#### REPORTING

#### **Reporting Process**

The expected time requirement for the external completion audit consultant will be 5 days in the field.

Initial Brief Summary: A site level close-out presentation will be provided by the consultants to IFC/NGGL at the completion of the field visit to highlight key aspects of the compliance monitoring relevant to the responsibilities of site staff. A separate strategic level close-out presentation will be provided by the consultants to NGGL senior management/IFC after completion of the field visit to highlight key strategic issues resulting from the compliance completion audit.

Final Draft Report: A draft final report in electronic form should be submitted to the IFC and NGGL generally within 15 days of completing field work activities. This report should include an activity log, a summary of the outcome of key meetings held, status of previously identified and specific recommendations as to how outstanding and/or problematic issues could be addressed and a corrective action schedule. The completion audit will clearly identify any corrective action needed to bring the issues in compliance with relevant laws and regulations, appropriate safeguard policies, existing commitments or best practice guidelines. If there are any issues of non-compliance, describe the severity of non-compliance. In addition to identifying the action, the consultants will estimate the complexity of the required action and the time required for it to be implemented.

IFC and NGGL will review the draft final report in a timely fashion and discuss any comments with the consultant who will then prepare the final report. Comments from both IFC/NGGL should be submitted to the report preparer within 15 working days of draft final report submittal.

In some instances environmental sampling may occur in support of compliance monitoring activities. In those cases, analytical results will not likely be available or included in the final draft report rather presented in the Final Report following review and discussion with NGGL.

Final Report: A final report will be prepared upon receipt and review of the comments from both the IFC and NGGL. The final report will be publicly disclosed.

#### **Report Disclosure**

The final report will be disclosed on both the IFC and NGGL web sites. In addition, copies of the report will be available in the local district offices and the NGGL Public Outreach office for public review.

#### **CONSULTANT SELECTION**

NGGL will evaluate and select appropriate external consultants to conduct the completion audit. The IFC will participate in and review the selection process and must be in agreement concerning the selected consultant(s). Both NGGL and the IFC may submit consultant recommendations to be considered as external/independent consultants.

The selected consultants must demonstrate specific skills (social, environmental and health and safety), experience and externality to be considered. NGGL may select consultants from several companies or unaffiliated to provide appropriate review capacity or may select one consultant who has the capacity to conduct all review requirements. This process must also be satisfactory to IFC. Consultants selected must comply with the NGGL polices as listed in Attachments A-D.

#### Annex A

# AHAFO SOUTH PROJECT ENVIRONMENTAL AND SOCIAL ACTION PLAN April 2006 (EHS Extracts relevant for Independent Monitoring Completion Audit November 2009)

#### INTRODUCTION

This document contains extracts of the Newmont Ghana Gold Ltd. (NGGL) Environmental and Social Action Plan (ESAP) dated April 2006 and contains resource-specific mitigation measures, monitoring plans, and implementation schedules, which were originally presented in Chapter 5 of the Ahafo South Environment and Social Impact Assessment dated August 2005. The intent of the plan was to eliminate, offset, or reduce to acceptable levels any adverse social, environmental, and occupational safety-related impacts (the social elements have been deleted from this extract as they are covered by a separate monitoring programme). The plan includes action items and identifies data needed to implement these measures.

The Environmental and Social Action Plan identified feasible and cost-effective management programs and specific mitigation measures expected to reduce potentially adverse impacts to acceptable levels. The plan is an integral component of the Ahafo South Project's overall planning, design, budget, and implementation. As an adaptive management strategy, the plan provides for modifications over time if information shows that changes should be implemented.

The ESAP update of April 2006 presented an overview of key activities at that time as well as any new actions identified during the period. The Environmental Action Plan (**Table ESAP-2**), and the Occupational Health and Safety Action Plan (**Table ESAP-3**) represent updates to tables originally presented in the ESIA document, Chapter 5 prepared in August 2005. Note that table **ESAP-1** is omitted (it related to the Social Action Plan)

#### **ENVIRONMENTAL ACTION PLAN**

NGGL is committed to design, develop, and operate the Ahafo South Project in a manner that will protect environmental quality and human health in the Project area. Upon completion of mining activity, reclamation will re-establish vegetation and stabilize disturbed areas such that the reclaimed site is compatible with the surrounding landscape and can support pre-mining agriculturally based land uses. Mine and process facilities will be designed and operated to protect the environment, consistent with Ghanaian laws.

The environmental monitoring aspect of the plan provides a check to determine effectiveness of mitigation during all phases of the project. The primary environmental impacts addressed in this action plan include:

- > Dust emissions;
- Water quantity;
- Water quality;
- Hazardous materials;
- Occupational health and safety;
- Emergency response;
- Waste management; and
- Reclamation/closure

#### Identified future actions

- ▶ Pit Lake Study. A pit lake analysis that describes expected development of pit lakes after cessation of mining will be completed in April 2006. Expected quality of pit lake water will be confirmed in this analysis. This study currently is underway by Golder Associates for NGGL.
- ➤ Environmental geochemistry. NGGL is conducting additional geochemical characterization of ore and waste rock from the Ahafo South Project. Characterization of waste rock composite samples will include SPLP, BAPP, PAG, and other kinetic tests. Results of these analyses will be used to confirm results of geochemical testing completed to date.
- Evaluate cyanide risk to fauna and livestock. NGGL will undertake a risk assessment of the operation of the tailings storage facility to ascertain the potential risks of mortality on wildlife and livestock due to cyanide and metal-cyanide complexes (e.g., copper cyanide complex). Should results of the risk assessment identify the need for installation of a cyanide detoxification circuit, NGGL would install such a facility as appropriate.
- Soil survey. A detailed soil survey in areas proposed for disturbance will be conducted. This survey will focus on identifying and describing soil variability as necessary to

accurately characterize the soil resource, refine determinations of effect, and develop a detailed closure plan including mitigation measures. Detailed soil survey information will be used in development of a detailed reclamation and closure plan.

Regional reclamation practice review. In order to further ensure success of resoiling and revegetation efforts aimed at reclaiming productive post-mine land uses, a review of regional reclamation practices will be conducted to investigate the relative successes and failures of various practices in establishing sustainable cropland, native forest, and other vegetative communities on disturbed areas.

#### OCCUPATIONAL HEALTH AND SAFETY ACTION PLAN

NGGL currently maintains and actively manages an extensive occupational health and safety program ("Loss Control") at the Ahafo South Project site. This program, including appropriate training and monitoring procedures, will continue once operations commence to ensure that high standards of health and safety are maintained.

**Table ESAP - 3** updates the status of specific Management Actions that will be implemented by the Health, Safety and Loss Control Department to manage potential health and safety impacts associated with the Ahafo South Project, including:

- Occupational health and safety;
- Emergency response;
- Waste management; and
- > Transportation of hazardous materials.

#### Key accomplishments during report period

- Development of Project-specific emergency response plans;
- > Development of Project-specific waste management and disposal plans; and
- Development of a Transportation Plan, including a route risk assessment.

	TABLE ESAP - 2 Environmental Action Plan								
General Action	Specific Related Impact	Specific Activity/Action	Schedule	Revised Action					
		Construction/Road watering	May 2004	On-going throughout Project					
Dust Emissions	Elevated Fugitive Dust	Mine Operations/Road watering and engineering controls	November 2005	On-going throughout Project		Additional training related to water management			
		Facility Reclamation	Completion of operations			-			
Water Quantity	Reduction of Surface Water Flow	Construction of ECDs and water storage reservoir/Monitoring & provision of alternative water sources to impacted population.	April 2005	Alternative water sources are in place.		Working on contract for drilling additional wells for long term solution			
	Reduction of Groundwater table	Mine Dewatering	November 2005	No dewatering necessary to date					
Water Quality	Erosion/Sediment Release	Pre-Construction/ Develop Sediment control guidelines	October 2003	Complete					
		Construction/Concurrent	April 2004	Complete					

reclamation, implement

#### TABLE ESAP - 2 **Environmental Action Plan** Specific Related Revised Revised **General Action** Specific Activity/Action Schedule Status(March Impact **S**chedule Action 31, 2006) BMPs, construction of Sediment control structures (ECDs) .Additional Consultants training being from Golder on provided to site and Dr. R. NGGL and Warner from Mine Ops U. of Kentucky group. . March providing 06 training in Mine Operations/Concurrent sediment reclamation, BMPs, surface control, water November lune 06 water management & 2005 management sediment control structures design, and sediment control modeling. Golder consultant on site until June 06 Completion of Facility Reclamation **Operations**

Facility Safety

Emergency

Project Wide

#### **TABLE ESAP - 2 Environmental Action Plan** Specific Related Revised Revised **General Action** Specific Activity/Action **S**chedule Status(March **Impact** Schedule Action 31, 2006) Design Phase On-going in Mine Operation/Engineering Completed. preparation for Process Solution **Operations** controls, training, startup. Release contingency planning planning ongoing Design Phase Mine Ops NGGL is working on completedmaking plans for an ICMC development finalizing CN Mine Operation/ICMC of contingency management pre-operational Cyanide implementation including plans and other Plan. audit of the llune 07 Management\* external audits related ICMC facility in June 06 with the first requirements during Preoperational ICMC Audit. operations Mine Operations/ongoing Contingency if characterization testing and Acid Rock ARD develops monitoring Drainage (ARD) Completion of Reclamation **Operations** Hazardous Previously Materials Safety Project Wide Completed **Materials** Occupational Previously Project Wide Health and Safety Health and Safety Completed

Previously

System

**Implementation** 

#### TABLE ESAP - 2 **Environmental Action Plan** Specific Related Revised Revised **General Action** Specific Activity/Action Status(March Schedule Impact Schedule Action 31, 2006) Response\* Completed Upgrades to the project sewage treatment plant Previously Waste Waste Project Wide sludge handling Management\* Completed Management process being evaluated and engineered in Perth Draft Plan Working on updating the developed for Reclamation plan for 06. Closure\* feasibility Facility Reclamation Project Wide 06 Study. Draft Plan updated in 2005. System implementation in 2<sup>nd</sup> Quarter Five Star Stakeholder Community Relations 2006 Management engagement Department Baseline 5-Star

Conduct baseline Five-Star

Develop continuous

Assessment

2<sup>nd</sup> Ouarter

2<sup>nd</sup> Quarter

2006

assessment

Sept. 05. On-going

conducted in

		TABLE ES Environmental				
General Action	Specific Related Impact	Specific Activity/Action	Schedule	Status(March 31, 2006)	Revised Schedule	Revised Action
		improvement action plan	2006	-		
		Conduct annual Five-Star Assessments	Annual	Second assessment scheduled for Nov. 06		
Pit Lake Study – Site Water Balance	Groundwater quality- pit lake water quality	Closure planning	Study implemented in 2005	Work started in March 06	Completion May 06	Pit Lake study to be completed in April 06. Golder contracted to update the existing WB and to develop computer model for ongoing management of the Ahafo site water balance.
Environmental	Reactivity of rock	Waste Dump Management	Study	Lab test	2 <sup>nd</sup> quarter	Constructing

	TABLE ESAP - 2 Environmental Action Plan								
General Action	Specific Related Impact	Specific Activity/Action	Schedule	Status(March 31, 2006)	1	Revised Action			
Geochemistry Confirmation Testing	in response to exposure to oxygen and water	and Closure planning	implemented in 2005	work is ongoing.	06	onsite columns for ARD test work			
Biodiversity Management	Promote biodiversity in affected areas	Pre-operation, operation, and closure planning	Pre-operation beginning in 2005	NGGL working with Conservation International to develop Biodiversity Management Plan.	Development of the plan is scheduled for 2006				
Evaluate CN Risk on fauna and livestock	Concentration of WAD CN and CN complexes in TSF supernatant pond	Pre-operation risk assessment of TSF operation	2 <sup>nd</sup> Quarter 2006	Risk assessment completed in March 06. Report to be finalized by April 06.		NGGL evaluating final options for CN destruct circuit to lower risk profile.			
		Expanded Baseline	Data Collection	on					
Soil Survey	Data augmentation	Pre-operation and Closure Planning		Work commenced in Feb. 06 and will		Additional work being conducted by Geomatrix in			

External/Independent Compliance Monitoring

TABLE ESAP - 2 Environmental Action Plan							
General Action	Specific Related Impact	Specific Activity/Action	Schedule	Status(March 31, 2006)	Revised Schedule	Revised Action	
				continue through 06		support of additional baseline data gathering work for the Ahafo Complex.	
Fauna	Data augmentation	Pre-operation and Closure Planning	January 2005	05 Study complete	On-going annual monitoring	Conservation International RBA and annual monitoring.	

			BLE ESAP - 3			
		Occupational He	alth and Safet			
General Action	Specific Potential Impact	Specific Activity/Action	Schedule	Status (March 31, 2006)	Revised Schedule	Revised Action
Occupational Health and Safety Training	Increased awareness of hazardous circumstances in the work place; reduced number of accidents and severity of accidents.	Implement the Occupational Health and Safety training program for all Project, operations, and contractor employees.	On-going	On-going throughout Project		
		Develop Project specific emergency response plans.	Pre- operation and on-going	Plans complete Jan. 2006		
Emergency Response*	Increase in safety of workers; reduced impacts to environmental	Conduct education and training of employees and contractors for emergency response procedures.	Pre- operation and on-going	On-going throughout Project		
	receptors.	Test and implement emergency response plans to ensure proper equipment and training needs are met.	Pre- operation and on-going	June 2006		

			BLE ESAP - 3			
General Action	Specific Potential Impact	Occupational He Specific Activity/Action	Schedule	Status (March 31, 2006)	Revised Schedule	Revised Action
	Properly designed management of waste	Develop Project specific waste management and disposal plans	Pre- operation and ongoing	Plans complete Jan. 2006		
Waste Management*	generated by the Project; reduction in inappropriate exposure of employees to waste; reduction in effects on environmental receptors.	Conduct employee and contractor training in proper handling and disposal of waste material – in accordance with design standards	On-going	On-going throughout Project		
		Implement waste management programs	On-going	On-going throughout Project and Closure		

	TABLE ESAP - 3							
		Occupational He	alth and Safet	y Action Plan				
General Action	Specific Potential Impact	Specific Activity/Action	Schedule	Status (March 31, 2006)	Revised Schedule	Revised Action		
		Transportation plan development including route risk assessment	2 <sup>nd</sup> quarter 2006	Plan complete				
Reduction in conflicts during transportation of hazardous and materials on	Contractor education, capacity building, and route monitoring	2 <sup>nd</sup> quarter 2006	June 2006 and on-going throughout Project					
Management of Hazardous Materials*	Management of Hazardous roads; increase in safety of	Community liaison and consultation	2 <sup>nd</sup> quarter 2006	June 2006 and on-going throughout Project				
		Coordination with local authorities and emergency response	2 <sup>nd</sup> quarter 2006	June 2006 and on-going throughout Project				
Five Star Management System	Stakeholder engagement	System implementation in Community Relations Department	2 <sup>nd</sup> quarter 2006		Nov. 2006			
Implementation		Conduct baseline Five- Star Assessment	2 <sup>nd</sup> Quarter 2006		Nov.2006			

	TABLE ESAP - 3 Occupational Health and Safety Action Plan								
General Action	Specific Potential Impact	Specific Activity/Action	Schedule	Status (March 31, 2006)	Revised Schedule	Revised Action			
		Develop continuous improvement action plan	2 <sup>nd</sup> Quarter 2006	On-going throughout Project and Closure					
		Conduct annual Five- Star Assessments	Annual	Annual					
		System implementation in Community Relations Department	2 <sup>nd</sup> Quarter 2006		Nov. 2006				

**Notes:** Reference to 2<sup>nd</sup> Quarter 2006 for implementation schedule is based on an anticipated startup of operations in that time period. .\* Various plans in development phase will be finalized by 2<sup>nd</sup> Quarter 2006 or within initial startup phase to allow plans to be field-fit to actual site conditions. All plans will be disclosed to the public upon acceptance by EPA and IFC as appropriate.