

**REPORT OF THE**

**EXTERNAL COMPLIANCE  
MONITORING GROUP (ECMG)**

**Sixth site visit (completion audit)  
December 2009**

***Ahafo South Project, Ghana***

This report has been prepared by:

**D'Appolonia S.p.A.** ECMG members:

**William J. Johnson** - Team Leader, Earth Science and Cultural Resource Management specialist

**Stefano Robaudo** - Environmental Engineering specialist

**Daniel Messmer** – Health and Safety specialist

**Giovanni De Franchi** - Environmental Engineering specialist

**Lori Anna Conzo** - Biodiversity and Natural Resource Management specialist

**SUBJECT: SIXTH SITE VISIT (COMPLETION AUDIT) OF THE D'APPOLONIA ECMG TO THE AHAFO SOUTH MINING PROJECT, GHANA, DECEMBER 2009**

### **Introduction and Executive Summary**

D'Appolonia S.p.A. from Genoa, Italy (D'Appolonia) is the External/Independent Environmental, Health and Safety (EHS) Compliance Monitoring Consultant (referred to as the External Compliance Monitoring Group – ECMG) for the Ahafo South Mining Project, Ghana (“the Project”). The Project is an open cast gold mine and associated facilities developed by Newmont Ghana Gold Limited (NGGL), a wholly owned Ghanaian subsidiary of Newmont Mining Corporation (Newmont) and the operations are located along a mineralized zone that extends approximately 70 kilometers (km) in the Brong Ahafo Region of Ghana, West Africa. Construction initiated in April 2004 and mining started in January 2006 with the pouring of first gold in July 2006. Ahafo South expects to produce 500,000 to 525,000 ounces of gold in 2009. The Ahafo South Mining Project is expected to add about an additional 4 million ounces to Ghana’s overall export of gold during the life of the mine based on the current mining plan.

Mining is currently conducted in three areas, the Subika, Apensu and Awonsu pits. The current NGGL workforce totals about 1,303 permanent Ghanaian workers and approximately 81 expatriates. Contractors augment this workforce by an additional 2023 workers to provide security, laboratory, vehicle and equipment maintenance, construction, catering, and transport services.

In January 2006, the IFC approved financial assistance in the form of a loan to NGGL to continue development of the Project, approximately the southern half of the overall Ahafo mineralized zone. NGGL committed to apply the IFC Social and Environmental Safeguard Policies and Guidelines (as applicable in 2006) to the design, construction, operation, and closure of the Project.

IFC involvement and financing require both pre-finance project due diligence and post-finance project assurance related to the various social, environmental, and health and safety IFC Safeguard Policies relevant to the Project, as presented in the ESIA, which was disclosed on August 29, 2005. NGGL has committed to external/independent social, environmental, and health and safety compliance monitoring to provide an additional level of transparency to the implementation of

social, environmental and health & safety management programs. Social compliance is independently evaluated and reported by other external assessors outside of the D'Appolonia ECMG organization. Public disclosure of the independent social audits, as well as D'Appolonia's independent ECMG reports, is provided on the Newmont Ahafo web site at <http://www.newmont.com/africa/ahafo-ghana/public-disclosure-documents>.

The scope of this site visit differs from previous site visits in that it represents a Compliance Completion Audit to verify that the following requisites have been met:

- Operation of the project is within compliance standards for key treatment facilities such as the tailings storage facility, water storage facility, sewage treatment plant;
- Environmental and safety management systems have been fully implemented and are fully operational; and
- All sites, equipment and facilities comprising the Ahafo South Project have been acquired, developed, constructed and become fully operational in compliance with the Environmental and Social Requirements.

Activities conducted during this completion audit focused on resolving the few remaining compliance issues identified during previous site visits and included the following:

- Meetings with the Project teams responsible for EHS compliance monitoring and review relevant plans, procedures and monitoring records;
- Visit to the sites of the Project facilities (including the operating Apensu, Subika and Awonsu Pits; Water Storage Facility (WSF); Tailings Storage Facility (TSF); and associated infrastructure);
- Meeting with Project team members and with Conservation International (CI) to discuss NGGL's ongoing partnership;
- Limited review of documentation provided by NGGL, specifically with respect to the Volta River Authority's (VRA) Kumasi-Sunyani Transmission Line;
- Conducting a closeout meeting with NGGL EHS and management personnel focusing on key findings, correction of any factual inaccuracies and possible corrective/upgrade actions.

The closeout meeting was conducted at the Ahafo South Mining Project on December 10, 2009 and the information presented in this meeting has formed the basis for this report. The information, observations, and opinions presented in this report are those of D'Appolonia and are independent of those of NGGL and the IFC.

Over the course of the past three years D'Appolonia has visited the Ahafo South location five times prior to this current trip and has prepared publicly available External Compliance Reports broken down into three key subject areas, as follows:

- Compliance with International Finance Corporation (IFC) Policies and Guidelines (2006);
- Compliance with the Environmental and Social Impact Assessment (ESIA) documentation; and
- Recommendations for Improvement based on D'Appolonia's experience.

## ECMG

In past missions, ECMG observations that required action were tabulated as compliance requirements and this table was updated following each site assessment. It is expected that future independent audits will focus more on whether or not NGGL is performing within their own EHS management system, rather than against specific IFC standards, as NGGL has now developed a system consistent with IFC requirements (2006).

For this completion Audit the compliance table has been reformatted to reflect the main performance issues identified over the course of the past three years in terms of their status in terms of compliance with the IFC Policies and Guidelines, which from an EHS standpoint include the following:

- IFC Operational Policy (OP) 4.01 - Environmental Assessment (October 1998);
- IFC OP 4.04 - Natural Habitats (November 1998);
- IFC OP 4.09 – Pest Management (December 1998);
- IFC OP 4.11 – Management of Cultural Property (referenced in ESIA, but not finalized at time of Financial Close; applicable standard OPN 11.03);
- IFC OP 4.37 - Safety of Dams (September 1999 Draft);
- WB Operational Policy Note (OPN) 11.03 - Management of Cultural Property in Bank-financed Projects (1986, reprinted August 1999);
- WB EHS Guidelines for Mining and Milling - Open Pit (August 1995);
- WB General Environmental Guidelines in Pollution Prevention and Abatement Handbook (July 1998);
- IFC Hazardous Materials Management Guidelines (December 2001); and
- IFC Occupational Health and Safety (OHS) Guidelines (June 2003).

Within the above group of standards, critical EHS compliance issues can be identified following general categories:

- *EHS Management system* – this category relates primarily to OP 4.01 and the key indicators of compliance are whether or not the environmental assessment was conducted appropriately such that potential impacts are defined and that there is a process of mitigating and managing adverse environmental impacts throughout Project implementation, in essence the EHS management system;
- *Pollution Prevention* – this category relates primarily to the WB General Environmental Guidelines (July 1998) and the EHS Guidelines for Mining and Milling - Open Pit (August 1995). Pollution prevention encompasses compliance with standards for air emissions, noise and vibrations, surface water contamination, groundwater contamination and the associated systems and processes in place to prevent pollution, in particular for cyanide management;
- *Waste Management* – this category also relates primarily to the General EHS Guidelines (July 1998) and the EHS Guidelines for Mining and Milling - Open Pit (August 1995). Main criteria for compliance are that final disposal solutions are appropriate and that measures to minimize waste generation and promote recycling are in place;
- *Hazardous Materials and Transportation Management* – this relates to IFC Hazardous Materials Management Guidelines (December 2001) as well as the OHS Guidelines (June 2003). The main compliance issues are that plans are in place and implemented to manage the transport of hazardous materials, in the case

## ECMG

of Ahafo South mainly associated with cyanide and fuel transport, and also with how hazardous materials are managed in the workplace;

- *Biodiversity and Ecological Management* – this topic falls under OP 4.04 (November 1998), but also under the EHS Guidelines for Mining and Milling - Open Pit (August 1995). The main criteria for compliance are that NGGL has provisions for protection, maintenance, and rehabilitation of natural habitats, and also that plans and procedures are in place and being implemented for mine reclamation activities (topsoil management; planting of vegetation to prevent erosion and encourage self-sustaining development of a productive ecosystem on the reclaimed land);
- *Occupational Health and Safety* – this topic is covered primarily by the OHS Guidelines (June 2003), but also by OP 4.09 (December 1998) in terms of one of the most significant health hazards – malaria. Compliance issues are that an OHS management system is in place; physical factors for worker protection are present; training programs are in place; plans, procedures, staff and equipment are in place for emergency response; and that ambient factors in the workplace (such as noise and vibration, but also including diseases like malaria) are monitored and controlled;
- *Dam Safety* – this topic relates to the design and operation of the Tailings Storage Facility and the Water Supply Facility primarily under OP 4.37, Safety of Dams (September 1999 Draft), but also under the EHS Guidelines for Mining and Milling - Open Pit (August 1995). Compliance issues related to dam safety include reviews by an independent panel of experts; preparation and implementation of detailed plans including a plan for construction supervision and quality assurance, a plan for instrumentation, an operation and maintenance plan, and an emergency preparedness plan; construction to be undertaken by fully qualified companies under proper supervision; and periodic safety inspections are being implemented. As one of the dams is a tailings facility, a compliance issue is also that the facility does not contaminate surface and groundwater regimes; and
- *Cultural Heritage* – the requirements are outlined in OPN 11.03 (1986, reprinted August 1999). Compliance issues are that projects that are sited or designed so as to prevent damage to sites having archeological (prehistoric), paleontological, historical, religious, and unique natural values.

The overall EHS management system is now complete with the finalization of the Plans, Procedures and SOPs for the EHS departments within NGGL. This is a major accomplishment that has resulted from ongoing efforts towards ISO 14001 and OSHAS 18001 certifications. ECMG considers the EHS management system to now be fully operational.

Only one issue associated with compliance with IFC emissions standards was still open at the time of the fifth field visit, community noise, in particular levels of nighttime noise that could be Project related. NGGL has undertaken a comprehensive program of monitoring and has identified solutions to mitigate against small exceedances to the IFC standards. ECMG considers this issue to be closed.

NGGL has undertaken significant effort to eliminate the main compliance issue associated with waste management, the use of the Kumasi Municipal Landfill for waste disposal. An Integrated Waste Management Facility (IWWMF) has been established with an area for managing hydrocarbon contaminated soils. Sewage

## ECMG

sludge is no longer going to Kumasi and is being dried and used as an ingredient for composting about to start at a newly constructed composting facility. A facility for a hazardous waste incinerator within the IWWMF is in the process of being constructed (the incinerator itself has been delivered) and it is expected that the last remaining hazardous waste streams will stop being sent to the Kumasi facility in the near term. However, NGGL has to ensure that their systems have enough redundancy to accommodate failure of a component without resorting to the use of the Kumasi landfill. Temporary storage for waste streams yet to find a compliant disposal solution in Ghana is being expanded at the IWWMF. ECMG considers that current waste management issues could be promptly closed.

As part of the development of the ESIA within the framework of OP 4.04, NGGL made commitments to develop a biodiversity management program. NGGL has continued to work with Conservation International (CI) to develop this program. The Biodiversity Management Plan (BMP) and the Biodiversity Implementation Plan, which is the program to implement the BMP, are now operational. Monitoring has now started at the Bosumkese and Amama forests and ECMG considers the biodiversity monitoring issues to be closed and that NGGL is compliant with OP 4.04. Another issue previously identified was verification that the WSF will serve as a viable long-term wetland habitat as was originally envisioned in the ESIA. A study by AMEC – Geomatrix confirms this is the case and ECMG considers this issue to also be closed.

One compliance gap with OP 4.37 identified since the first ECMG visit in 2006 has been the lack of an Emergency Preparedness Plan (EPP) associated with the construction of the WSF and TSF. This Plan is now complete and the ECMG considers this issue to be closed.

As part of the development of the ESIA within the framework of OPN 11.03, NGGL developed a Cultural Resources Management Plan (CRMP) revised in February 2008 that includes the process to be followed in case of a chance archaeological find in the field. A deficiency identified with respect to the implementation of this CRMP was having qualified observers to be able to conduct a chance finds protocol and having a dedicated Cultural Resource Manager (CRM) to be responsible for Plan implementation. NGGL has initiated a training program to start in February 2010. ECMG considers that this gap to be closed.

In summary, ECMG considers that NGGL is compliant with IFC 2006 requirements with some actions planned to take place in the near future. Table 1 summarizes the compliance status of the Project in greater detail.

**Table 1**  
**Compliance Status**

This table summarizes the IFC compliance status of the Ahafo South Mine according to the critical EHS topics identified above. Compliance categorizations are as follows:

- **Critical Action required for Completion:** Not compliant with IFC standards and a program to achieve compliance has not been developed.
- **Action required:** Non-compliant condition, but NGGL has demonstrated a program to achieve compliance in the near term.
- **No Action required:** Item is considered completed.

The requirements and commitments defined in this table are not the entire range actions for which NGGL is responsible to achieve IFC compliance, but are the primary ones for EHS issues. For example, the requirement for the preparation of a Resettlement Action Plan (RAP) is not identified in this table, as this topic is addressed by the Independent Social Compliance Auditors. Social/community requirements are not identified, except as they relate to environmental issues.

IFC Policy / ESIA Compliance	Requirement/Commitment	Actions Undertaken	Compliance	Comments and/or Actions (as necessary)
<i>EHS Management</i>				
IFC (IFC OP 4.01) Annex B	Environmental Assessment (EA) – this is a requirement whereby the Project's potential negative and positive environmental impacts are examined, compared with those of feasible alternatives (including, the “without project” situation), and any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance are recommended. The Project sponsor is responsible for preparing an Environmental Assessment Report that follows the outline of OP 4.01 Annex B.	Preparation of an Environmental and Social Impact Assessment (ESIA)	<b>No action Required</b>	The ESIA fulfills the requirements for an Environmental Assessment Report.

IFC Policy / ESIA Compliance	Requirement/Commitment	Actions Undertaken	Compliance	Comments and/or Actions (as necessary)
<p>IFC (IFC OP 4.01 – Annex C)</p>	<p>IFC OP 4.01 requires that the Project prepare an environmental action plan (EAP) that consists of the set of mitigation, management, monitoring, and institutional measures to be taken during implementation and operation to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels. The plan also needs to include the actions needed to implement these measures. Project sponsors and their EA design team are required to (a) identify the set of responses to potentially adverse impacts; (b) determine requirements for ensuring that those responses are made effectively and in a timely manner; and (c) describe the means for meeting those requirements. Detailed requirements are described in OP 4.01 Annex C.</p>	<p>An Environmental and Social Action Plan (ESAP) was presented in Section 5 of the ESIA and subsequently updated in April 2006. The ESAP partially fulfills the requirements of the IFC requirement for the development of an EAP in that it provides a road map for the development for a complete EHS Management System. It identifies the Project management programs and specific mitigation measures expected to reduce potentially adverse impacts to acceptable levels. The ESAP includes a requirement for environmental monitoring to verify the effectiveness of mitigation during all phases of the Project. The ESAP also specifies institutional responsibilities, an implementation schedule, and cost estimates. The Plan provides for modifications over time if information shows that changes should be implemented.</p>	<p><b>No action Required</b></p>	<p>The development of a complete EHS Management System has been a complex and time-consuming effort for NGGL. The initial efforts started with an attempt to adapt the Newmont 5-Star Management System to site-specific conditions. This process was subsequently abandoned in favor of developing a complete management system under ISO 14000 – OSHAS certifications. This process is not yet complete, but the Plans and associated Standard Operating Procedures (SOPs) for the EHS component of the Project have been finalized. Deficiencies previously identified by the ECMG in terms of referencing IFC requirements within this management system have been addressed.</p> <p>A <u>recommendation</u> for improving NGGL's current system is to make it easier for Project Management to understand which non-conformances/non-compliances have the highest priority for action. ECMG previously recommended a tiered system for classification of non-conformances/non-compliances, whereas the current Corrective Action-Preventive Action (CAPA) system highlights these situations on the basis of whether or not an item is open, assigned or closed – you have to dig into the system to see which items need to be assigned a high priority.</p> <p>The above is a recommendation for improvement and not a non-compliance and the previous issues identified by the ECMG for EHS Management are considered closed.</p>



IFC Policy / ESIA Compliance	Requirement/Commitment	Actions Undertaken	Compliance	Comments and/or Actions (as necessary)
IFC (IFC OP 4.01 – para.4)	The Sponsor needs to demonstrate that it has an in-house environmental unit with adequate budget and professional staffing strong in expertise relevant to the Project.	NGGL has developed an environmental department to manage environmental issues.	<b>No action Required</b>	The organization of the Environmental Department is consistent with IFC requirements and staffing is complete. In particular, the Project has demonstrated good training such that a transition to management entirely by Ghanaian nationals is nearly complete (only one expatriate out of a group of 47 there is only one expatriate)
<p><b>Pollution Prevention</b></p> <p>The requirements for pollution prevention are very broad and are generally defined in the IFC General EHS Guidelines and the EHS Guidelines for Mining and Milling - Open Pit. Pollution prevention encompasses compliance with standards for air emissions, noise and vibrations, surface water contamination, groundwater contamination and the associated systems and processes in place to prevent pollution. The type of gold mining undertaken by NGGL also has requirements for preventing contamination from the use of cyanide. Overall compliance with these topics is presented separately.</p>				
IFC General Environmental Guidelines and EHS Guidelines for Mining and Milling - Open Pit	<u>Air Emissions:</u> IFC has air emissions standards defined for both emissions and ambient air. The Ahafo South Mine uses electricity from the Ghanaian power grid and therefore does not have a power source of the size that it would fall under IFC requirements for emissions monitoring and the IFC requirements effectively are for ambient air.	The environmental control measures indicated in the ESIA refer to the management and mitigation of both fugitive dust emissions and gaseous emissions. Fugitive dust is associated with mine operations including blasting, ore and waste rock hauling, dumping, grading, backfilling actions, as well as from increased vehicular traffic in the area. Gaseous emissions are generated from operation of mine equipment, combustion sources, and vehicular exhausts. The control measures to mitigate fugitive dusts include watering or use of other	<b>No action Required</b>	Ambient air continues to be monitored for CO, NO, SO <sub>2</sub> , NO <sub>2</sub> , and NO <sub>x</sub> at nine locations in the general area of mining, as well as at camps and local communities. None of the test results suggest problems that need to be addressed and all are within applicable standards.

IFC Policy / ESIA Compliance	Requirement/Commitment	Actions Undertaken	Compliance	Comments and/or Actions (as necessary)
		<p>surface binding and/or wetting agents, reclamation and revegetation, vehicular speed control, road maintenance, and use of dust suppression sprays or dry dust collection systems on ore crushing circuits and transfer points at the processing plant. Gaseous emissions are mitigated through proper operation and equipment maintenance, as well as specific end-of-pipe treatments, including scrubbing of emissions from the carbon regeneration kiln at the processing plant. The Project has committed to implement dedicated air monitoring programs for both dust and gaseous emissions control.</p>		<p>The single area parameter for which there is non-compliance with an IFC standard is for dust. The Project has demonstrated an aggressive dust control program and non-compliances are observed only during the dry season in association with Harmattan (when dry, dusty winds blow off of the Sahara Desert). At this time, ambient air exceeds the IFC standard, even in areas not affected by the Project and ECMG does not consider this situation to represent a non-compliance.</p>
<p>IFC General Environmental Guidelines</p>	<p><u>Noise and Vibrations:</u> The IFC provides standards for Project-induced noise, both from the standpoint of occupational exposure in the workplace and levels of noise at local communities (both daytime and nighttime levels). Vibrations and blast overpressure are parameters not covered by the IFC.</p>	<p>The Project has established self-imposed limits for blast vibration and overpressure are very conservative in terms of what constitutes best practice and effectively represent a comfort level, rather than what could cause actual damage or represent public harm.</p>	<p><b>No action Required</b></p>	<p>Recent blast monitoring data are within project conservative standards for vibrations. There continue to be a few small excursions above the project overpressure standard, but it is recognized that the standards are NGGL self-imposed and well within what would constitute good practice.</p>

IFC Policy / ESIA Compliance	Requirement/Commitment	Actions Undertaken	Compliance	Comments and/or Actions (as necessary)
		<p>NGGL monitors noise levels in the workplace and also at local communities. Where workplace noise levels exceed IFC guidelines, hearing protection is provided. Actual noise values for the communities monitored are generally compliant with IFC's daytime values but nighttime noise is frequently above the IFC residential limit.</p>		<p>The subject of community noise has been identified as a potential IFC non-compliance in several previous ECMG reports. Since the last ECMG trip in April 2009, NGGL has undertaken a program to improve their measurement program and better understand the sources of nighttime noise with the help of AMEC Geomatrix. Nighttime noise with proper measurements appears to be slightly non-compliant and likely due to the dumping of waste rock. Nighttime waste rock dumping has ceased at critical areas and initial test results confirm that this does lower nighttime noise. At locations where there is still a slight exceedance of nighttime noise, NGGL continues to work with affected villages (Kantinka and Morokrom are being relocated) via the community relations department. D'Appolonia considers the current program being undertaken by NGGL to be consistent with the intent of IFC requirements and this issue to be closed.</p>

IFC Policy / ESIA Compliance	<u>Requirement/Commitment</u>	Actions Undertaken	Compliance	Comments and/or Actions (as necessary)
<p>IFC General Environmental Guidelines and EHS Guidelines for Mining and Milling - Open Pit</p>	<p><u>Surface Water:</u> The IFC General Environmental Guidelines and the EHS Guidelines for Mining and Milling - Open Pit both define limits for water discharge into the surface water regime.</p>	<p>Wastewater from the sewage treatment plants is treated such that discharges are compliant with IFC requirements, but in any case the treated effluent from both facilities is sent to the TSF where it is mixed with tailings decant water and recycled for processing.</p> <p>Testing of waste rock has confirmed that leachate from the waste rock piles has minimal potential to contaminate water resources and monitoring has proven this to be the case.</p> <p>Surface water control ditches are constructed as necessary to intercept and divert potential run-on water from flowing into mine pits, the TSF, or onto waste rock disposal facilities and ore stockpiles. These channels divert uncontaminated run-on water back into natural drainage downgradient from disturbed areas or into environmental control dam (ECD) impoundments.</p> <p>No water discharge is allowed from the TSF.</p> <p>Surface water quality is monitored at numerous locations. Specifically, twenty three surface water monitoring points have been selected, including locations at the ECDs and WSF.</p>	<p><b>No action Required</b></p>	<p>Target release criteria for the sediment control system (ECDs) are generally compliant with the IFC standard for total suspended solids (TSS). In the few occasions where this standard has been exceeded, NGGL has worked with affected communities to mitigate such exceedances as appropriate and improve the erosion and sediment control systems to prevent excess sediment from entering the ECDs. ECMG considers NGGL's performance to be compliant with IFC requirements.</p> <p>Cyanides within the dewatering discharge are mostly below their detection limit for WAD Cyanide and always well below the IFC Mining and Milling – Open Pit guideline discharge limit.</p>

IFC Policy / ESIA Compliance	<u>Requirement/Commitment</u>	Actions Undertaken	Compliance	Comments and/or Actions (as necessary)
<p>IFC General Environmental Guidelines                      and                      EHS Guidelines for Mining and Milling - Open Pit</p>	<p><u>Groundwater</u>: Numerical standards for groundwater contamination are not specified by the IFC except to require that hazardous materials must not be disposed of in a manner likely to result in soil or groundwater contamination if groundwater is potentially useable for potable water or irrigation purposes. Waste rock dumps should be designed and engineered so that materials with high potential to generate acid leachate are isolated from oxidation or percolating water.</p>	<p>Groundwater is extensively monitored around the TSF, as well as at other key locations around the Ahafo South mine. Pit dewatering is being monitored and groundwater modeling has been conducted to identify potential impacts to local communities and to wetlands.</p> <p>Mine dewatering is producing water with anomalously high sulfate, especially from Subika pit dewatering, and nitrate values from Apensu pit have exceeded allowable standards. In response to this situation NGGL has constructed two storage ponds that allow for the most contaminated water to be diverted to the processing plant such that this water does not enter surface or groundwater regimes.</p>	<p><b>No action Required</b></p>	<p>NGGL has procedures in place to protect community water supplies from mine dewatering. Wetlands potentially affected have been determined not to be a significant resource. Monitoring has not identified chemical releases from mining.</p>

IFC Policy / ESIA Compliance	<u>Requirement/Commitment</u>	Actions Undertaken	Compliance	Comments and/or Actions (as necessary)
<p>IFC General Environmental Guidelines and EHS Guidelines for Mining and Milling - Open Pit</p>	<p><u>Associated Systems and Processes, including Cyanide Management:</u> The IFC General Environmental Guidelines provide recommendations for the infrastructure required for pollution prevention, such as for storage and liquid impoundment areas for fuels, raw and in-process materials, solvents, wastes, etc., where they should be designed with secondary containment (e.g., dikes and berms) to prevent spills and the contamination of soil, groundwater, and surface waters. The EHS Guidelines for Mining and Milling - Open Pit provide cyanide discharge limits.</p>	<p>NGGL has containment structures and pollution prevention systems for hazardous materials and waste consistent with good practice.</p> <p>Cyanide is the means for extracting gold from the mined ore. After completion of the processing, the cyanide within the tailings is recycled within the recently installed Counter-Current Decantation (CCD) plant to achieve acceptable wildlife and livestock contact concentrations (WAD – cyanide concentration &lt;50 mg/l) in the TSF, where the tailings are piped. Cyanide management procedures exceed IFC requirements and are certified with the International Cyanide Management Code (ICMC).</p>	<p><b>No action Required</b></p>	<p>Operation of the CCD facility has greatly reduced the amount of WAD cyanide entering the TSF. Since the April 2009 site visit about 3% of the measurements have exceeded the “open-water” standard of 50 mg/l WAD cyanide at the spigot, but the highest value recorded was only 65 mg/l, with no exceedances since August 21. Decant water in the TSF has been less than 0.5 mg/l WAD cyanide since April 2009. ECMG considers this to be acceptable performance.</p> <p>On October 12, 2009 a cyanide spill took place whereby a sensitive “outside the fence” condition was realized as a result of the small cyanide release following maintenance shutdown operations. This event has triggered major changes in operations and containment infrastructure. ECMG does not consider this situation to represent a non-compliance, as NGGL acted appropriately.</p>

IFC Policy / ESIA Compliance	<u>Requirement/Commitment</u>	Actions Undertaken	Compliance	Comments and/or Actions (as necessary)
<i>Waste Management</i>				
<p>IFC General Environmental Guidelines and EHS Guidelines for Mining and Milling - Open Pit</p>	<p><u>Solid Waste Management</u>: The IFC General Environmental Guidelines promote waste minimization, substituting non-hazardous materials for hazardous materials where practical and recycling. Both the IFC General Environmental Guidelines and EHS Guidelines for Mining and Milling - Open Pit indicate that hazardous wastes must be disposed of in an environmentally acceptable manner and in compliance with local laws and regulations. Environmentally acceptable can be inferred from the IFC General Environmental Guidelines for disposal facilities by the requirement that leachates that contain hazardous pollutants must not exceed the liquid effluent levels given for other surface water discharges.</p>	<p>According to the ESIA, “<i>Non-hazardous waste disposal will be conducted in accordance with Ghanaian requirements and NGGL’s waste disposal protocols. NGGL will monitor waste generation and disposal conditions during construction, operation, and closure. Should conditions warrant, NGGL will implement additional waste minimization, treatment, and disposal measures beyond those currently identified</i>”. This approach has allowed for waste disposal at the Kumasi Municipal Landfill, a facility licensed by the Ghanaian Government. This facility does not have any leachate treatment and the leachate from this landfill that accepts hazardous waste directly enters the surface water regime. As this contradicts IFC requirements, NGGL has been developing waste management programs to eventually eliminate the use of this facility by means of the development of a composting facility, providing storage for certain waste streams until an environmentally sound disposal solution is available in Ghana, and developing a hazardous waste incinerator facility as part of an Integrated Waste Management Facility (IWMF).</p>	<p><b>Action Required</b></p>	<p>NGGL has made significant progress in developing environmentally sound procedures for domestic and hazardous waste management. Waste tracking systems have been developed; waste minimization procedures have been established; recycling programs have been developed to the degree practical; contaminated soil is now being treated at the IWMF; and most of the waste streams going to Kumasi have been eliminated. NGGL will be fully compliant with the good practice anticipated by the IFC Guidelines when the use of the Kumasi landfill has been completely and permanently eliminated. It is expected that this will be accomplished when the incinerator is functional (the unit has been delivered on site). In addition, NGGL has to ensure that their systems have enough redundancy to accommodate failure of a component without resorting to the use of the Kumasi landfill.</p>

IFC Policy / ESIA Compliance	<u>Requirement/Commitment</u>	Actions Undertaken	Compliance	Comments and/or Actions (as necessary)
<p>IFC General Environmental Guidelines and EHS Guidelines for Mining and Milling - Open Pit</p>	<p><u>Wastewater Management</u>: Effluent discharge requirements are defined by the IFC in the Guidelines</p>	<p>The two permanent packaged Sewage Treatment Plants (STPs) are installed at the plant site and at the Mensah Kumta Camp. Treated effluent from both facilities is sent to the TSF where it is mixed with tailings decant water and recycled for processing. Excess sludge from the plants as well as the raw sewage from the Rank and the Kenyasi septic tanks was hauled by truck to the Kumasi Metropolitan landfill by a contractor, but this practice stopped in November 2009 with the installation of a sludge drying unit to prepare dried sludge as an ingredient for the composting facility about to be started. The existing plants were recently modified to accommodate increased volume of sewage.</p>	<p><b>No action Required</b></p>	<p>The sewage treatment facilities are exemplary.</p>
<p><b><i>Hazardous Materials and Transportation Management</i></b></p>				
<p>IFC Hazardous Materials Management Guidelines) and</p>	<p>The basic procedures developed by NGGL for the management of hazardous materials are outlined in the ESIA under the title of “Material Handling” specific to chemicals and other materials located on NGGL properties, including for cyanide, explosives, caustic soda, sodium hypochlorite and other hazardous materials.</p>	<p>A specific NGGL Hazardous Materials Management procedure is final and details the responsibilities of the various departments and functions with respect to Hazardous Materials transportation and management. Training programs are comprehensive and audits continue to be performed by the NGGL HSLP Department on contractors handling hazardous materials.</p>		



IFC Policy / ESIA Compliance	Requirement/Commitment	Actions Undertaken	Compliance	Comments and/or Actions (as necessary)
<p>IFC General Environmental Guidelines and IFC Environmental and Social Guidelines for OHS</p>	<p>The NGGL training programs cover the management of hazardous materials. The ESAP defines an additional goal of hazardous materials management associated with community safety to be “reduction in conflicts during transportation of hazardous materials on roads; increase in safety of public and workers during transport of materials.”</p>	<p>Transportation of hazardous materials is one of the activities associated with the greatest hazard, but Contractors’ procedures for handling hazardous substances and segregation and management of hazardous substances are fully in place. Companies like Orica (cyanide transport) and Shell (fuel transport) have well-developed procedures to minimize the potential for accidents.</p>	<p><b>No action Required</b></p>	<p>Evidence that the overall system is working is that there has not been a significant spill of cyanide or fuel as part of the transport process. Good practice has been observed for the handling of hazardous materials in the workplace.</p>
<p><b><i>Biodiversity and Ecological Management</i></b></p>				
<p>OP 4.04 and ESAP</p>	<p><u>Biodiversity</u>: OP 4.04 has the basic expectation that the sponsor should apply a precautionary approach to natural resource management to ensure opportunities for environmentally sustainable development. The Project’s ESAP outlines a series of commitments, environmental control measures and additional actions for these natural resources.</p>	<p>NGGL has strived to build alliances with local communities and with NGOs. As part of this effort, the Project has entered into a biodiversity partnership with CI, an internationally recognized NGO and leader in global conservation (referenced in this report as the NGGL-CI Partnership). Conservation International officially entered into partnership with NGGL in 2006.</p>	<p><b>No action Required</b></p>	<p>Relationship with Conservation International continues to be effective. Pending actions at the time of the April 2009 site visit, the finalization of the Biodiversity Monitoring Plan with an associated Biodiversity Implementation Plan, are now complete.</p>

<p>OP 4.04 and ESAP</p>	<p>These control measures (e.g., noxious weed monitoring and control plan, fencing around mine pit rims, policies for employees and contractors, reclamation of certain facilities, and sediment and surface water control and management) are primarily designed to address direct impacts.</p>			<p>Another action identified from the ESAP was the demonstration of the ability of the WSF to compensate for the lost wetlands/swampy drainage areas that were previously located in the vicinity of the project area now occupied by the TSF. AMEC Geomatrix has completed a survey of wetlands in the area of the Ahafo South Mine Complex and this study confirms that the area of created wetlands does exceed the area of wetlands that existed prior to mining. The above issues related to biodiversity are considered to be closed.</p>
<p>OP 4.04 and ESIA</p>	<p><u>VRA transmission line</u>: A new VRA 161kV overhead power transmission line between Kumasi and Sunyani substations has been planned for some years. The NGGL project provided the impetus to start construction since NGGL requested that VRA realign the originally planned route of the transmission line so that it could provide a stable source of electricity to the mine site. VRA and NGGL entered into a Memorandum of Understanding whereby NGGL would finance the realignment. The line was thus identified as an associated facility in the project's ESIA. The power line is constructed in a 30-meter wide right-of-way (ROW), extending 154-km and totaling an approximate 470-hectares, including access tracks.</p>	<p>A Gap Analysis was conducted by an independent consultant in August 2006 to determine if there were any gross policy violations of the IFC's Operational Policies, including OP 4.04 - Natural Habitats, among others. In the Final Report produced from this exercise, it was determined that there were no gross policy violations at the time of writing; however, a series of recommendations were made to ensure future compliance.</p>	<p><b>No action Required</b></p>	<p>NGGL continues biannual inspections undertaken together with VRA personnel. NGGL – VRA findings from the last inspection in August 2009 are as follows:</p> <ul style="list-style-type: none"> <li>• Apart from the forest roads created by Forest Services Division for their inventory exercise and routine inspections, no other trails were observed</li> <li>• No trails or snares that suggest poaching</li> <li>• No evidence of illegal logging activities</li> </ul>

IFC Policy / ESIA Compliance	<u>Requirement/Commitment</u>	Actions Undertaken	Compliance	Comments and/or Actions (as necessary)
OP 4.04 and ESIA	<p>In addition to supplying electricity to the mine site, the transmission line will provide an alternative power supply route to the load centers located in Brong Ahafo, Northern, Upper East, and Upper West Regions of Ghana. As the IFC considers the VRA transmission line an associated facility to the Ahafo South Project, gross compliance with applicable Operational Policies is required.</p> <p>OP 4.04 is the most critical Operational Policy, because the ROW crosses four forest reserves (i.e., Gyemera, Offin, Tano Offin, and Amama).</p>	<p>Those relevant to OP 4.04 include further measures to reduce impact on critical habitat identified within the Tano Offin Forest Reserve. NGGL committed to conduct biannual inspections of the ROW to monitor any potential encroachment in the vicinity of Compartment 98.</p>	<p><b>No action Required</b></p>	<ul style="list-style-type: none"> <li>No encroachment due to farming or bush fires</li> <li>Entanglement of towers by climbers observed to be a major problem</li> <li>Recommended to the VRA team responsible for the maintenance of the towers to ensure that the ROW is weeded before inspection.</li> </ul> <p>Information provided by Conservation International (CI) is not fully concordant with these observations and it is recommended that NGGL and CI increase dialogue to understand differences of opinion.</p>
OP 4.04 and EHS Guidelines for Mining and Milling - Open Pit	<p><u>Reclamation, Revegetation, and Topsoil Management:</u> EHS Guidelines for Mining and Milling - Open Pit requires procedures for mine reclamation that includes reclamation of tailings deposits, any open pit areas, sedimentation basins, and abandoned mine, mill, and camp sites.</p>	<p>The ESAP defines measures to prevent and mitigate the impacts on soil resources. Potential impacts of concern include reduction of topsoil fertility and increased erosion due to surface disturbance, vegetation removal, and lack of adequate reclamation. NGGL is committed to implementing actions to protect and preserve the topsoil in the mining area and to reuse it during reclamation. Other important actions are related to erosion minimization through temporary and permanent erosion control measures in disturbed areas.</p>	<p><b>No action Required</b></p>	<p>Experimentation to develop procedures to reclaim waste rock areas is showing fruition. Deeply buried stockpiled topsoil does show evidence of deterioration, but it can regain viability when mixed with shallow topsoil and saprolite. The Project also has developed an aggressive program to address invasive species.</p>

IFC Policy / ESIA Compliance	<u>Requirement/Commitment</u>	Actions Undertaken	Compliance	Comments and/or Actions (as necessary)
<p>OP 4.04  and  EHS Guidelines for Mining and Milling  - Open Pit</p>		<p>NGGL is committed to reclaiming all surface disturbances in accordance with applicable Ghanaian regulations and Newmont's Standards for closure and reclamation of mining facilities. A responsibility of the Reclamation team is to conduct and monitor all soil resource protection activities. As part of its commitments, this team conducts inspection of reclaimed and revegetated areas to monitor the success of the reclamation activities and ensure the minimization of erosion and sedimentation impacts.</p> <p>Vegetation monitoring, including visual inspection, noxious weed identification and annual sampling for plant community characteristics, is expected to continue for five years after final reclamation.</p>	<p><b>No action Required</b></p>	

IFC Policy / ESIA Compliance	<u>Requirement/Commitment</u>	Actions Undertaken	Compliance	Comments and/or Actions (as necessary)
<b><i>Occupational Health and Safety</i></b>				
EHS Guidelines for Mining and Milling - Open Pit and IFC Environmental and Social Guidelines for OHS	<u>OHS Management</u> : IFC guidelines include definition of OHS policy, requirements for the framework of an OHS Management System, hazard prevention requirements including emergency response, requirements for performance monitoring and measurements, and criteria for feedback and making improvements.	NGGL maintains and actively manages an extensive occupational health and safety program (Health, Safety and Loss Prevention - HSLP) at the Ahafo South Project site. The program includes training and monitoring procedures.	<b>No action Required</b>	A deficiency identified with respect to the HSLP program at the Ahafo South Project as identified from previous ECMG trips has been the finalization of Plans and Procedures. This process is effectively complete as part of NGGLs effort to achieve ISO 14001 and OSHAS 18001 certifications. The 15 HSLP procedures are final except for Surface ground Control and 30 SOPs are finished. Integrated management system will improve deficiency recognition and correction options.
EHS Guidelines for Mining and Milling - Open Pit and	<u>Occupational Health</u> : Key issues for occupational health include exposure to heavy metals as part of the mining process, mainly lead exposure, and also from disease, especially malaria and HIV.	An Occupational Health and Hygiene Management System Procedure is in place. The procedure describes responsibilities, exposure limits, type of characterizations, exposure assessments whose frequency is based on the risk rating attributed to each SEG (Similar Exposure Group). Workers' exposure is controlled through a program of monitoring.	<b>No action Required</b>	Monitoring of industrial hygiene conditions continues through implementation the sampling plan in-place. Lead exposure reduction measures isolate the zone of risk through adoption of reconfigured ventilation system and additional fans. Frequent medical tests are still performed so NGGL can quickly assess and react to measured levels.

IFC Policy / ESIA Compliance	<u>Requirement/Commitment</u>	Actions Undertaken	Compliance	Comments and/or Actions (as necessary)
IFC Environmental and Social Guidelines for OHS		NGGL implements a malaria prevention and control program that extends to the local community. A key aspect of effort continues to be monitoring pools and puddles of water bodies within the control zone treating them with larvicide, as appropriate. An HIV/AIDS program, mainly addressed to community education and distribution of condoms to prevent the spread of HIV/AIDS, continues to be developed as part of NGGL's community health program.	<b>No action Required</b>	The Malaria Control Plan implemented by HSLP is still ongoing – a team aggressively searches for mosquito larvae and applies larvicide. The malaria rate in the control zone dropped from 8% of the subject population in 2006 to 1.7% of the subject population in 2009. HIV prevention is also still an active program.
EHS Guidelines for Mining and Milling - Open Pit and IFC Environmental and Social Guidelines for OHS	<u>Emergency Preparedness:</u> The arrangements must ensure adequate internal exchange of information and communication, and provide for information and communication with outside authorities and the neighborhood as needed. The system must adequately address first-aid and medical assistance, firefighting and emergency evacuation of staff. Training and exercises shall be conducted.	NGGL has developed a fully functional emergency response component within their HSLP department.	<b>No action Required</b>	The HSLP organization has made possibly their greatest progress in terms of emergency response. The emergency response team is now staffed, equipped, and trained. A deficiency identified at the time of the April 2009 site visit was with respect to hazmat training. This training has been conducted and the emergency response team performed well during the October 12, 2009 cyanide spill.

IFC Policy / ESIA Compliance	<u>Requirement/Commitment</u>	Actions Undertaken	Compliance	Comments and/or Actions (as necessary)
<b>Dam Safety</b>				
<p>IFC OP 4.37 and EHS Guidelines for Mining and Milling - Open Pit</p>	<p>Compliance issues related to dam safety under OP 4.37 include reviews by an independent panel of experts; preparation and implementation of detailed plans including a plan for construction supervision and quality assurance; a plan for instrumentation; an operation and maintenance plan; and an emergency preparedness plan with construction to be undertaken by fully qualified companies under proper supervision and implementation of periodic safety inspections. As one of the dams is a tailings facility, a compliance issue is also that the facility does not contaminate surface and groundwater regimes.</p>	<p>The TSF and WSF were designed by Knight Piésold Pty Ltd (KP) in 2004. The design of the tailings pumps, pipework and return water system were carried out by Lycopodium Engineering Pty Ltd (Lycopodium). Construction management is currently being self-performed by NGGL, supported by design and QA/QC services provided by Knight Piésold for the current phase of the facility expansion. The current phase of construction will provide tailings capacity until approximately 2Q 2010.</p> <p>The TSF has been started as a single main embankment at the south end of the Subri River (South Embankment). The upstream limit to tailings deposition is the WSF dam (North Embankment). The facility is planned to ultimately comprise a four-sided main embankment constructed in annual stages over 11 years utilizing mine waste rock and, if necessary, fill from designated borrow areas. The plans for final completion of the TSF are not yet finalized, pending decisions yet to be made for mining associated with the Ahafo North area. The TSF is operated as a “zero discharge” facility, with all water returned for use in the ore processing circuit, and no water discharged to the environment.</p>	<p><b>Action Required</b></p>	<p>The TSF and WSF are both being managed with plans consistent with IFC requirements. The major compliance gap with respect to the TSF has been the lack of an Emergency Preparedness Plan (EPP). AMEC Geomatrix has now finalized this Plan and mock disaster drills are to start Q1 2010 with involvement of local community. ECMG considers this compliance issue to be closed.</p> <p>The TSF is being monitored by means of groundwater monitoring wells that have not detected any evidence of leakage.</p> <p>IFC requires reviews by an independent panel of experts throughout investigation, design, and construction of a large dam. The only independent review of the TSF and WSF was conducted in 2005 by Chlumsky, Armbrust and Meyer (CAM). This is considered the only item still pending for IFC compliance. It is understood that NGGI is planning a third-party independent audit in June 2010.</p>

IFC Policy / ESIA Compliance	<u>Requirement/Commitment</u>	Actions Undertaken	Compliance	Comments and/or Actions (as necessary)
<b><i>Cultural Resource Management</i></b>				
IFC OPN 11.07 as committed in NGGL Cultural Resource Management Plan (Rev. 1, 2008)	Compliance issues are that projects need to be sited or designed so as to prevent damage to sites having archeological (prehistoric), paleontological, historical, religious, and unique natural values.	<p>As part of the ESIA preparation process, a survey entitled “Newmont Ghana Gold Limited, Cultural Heritage Survey at Ahafo, Ahafo Gold Project, Reference – B333, Version 1.0 dated March 2005” was prepared by SGS Environment. The survey identified 18 sites including cemeteries, shrines, water bodies, a tree, and a hill. Subsequent to this survey, a Cultural Resource Management Plan dated August 2006 was prepared, which was revised in February 2008.</p> <p>Archaeological studies were completed for the Ahafo South project under the management Geomatrix working with of Prof. Yaw B. Mensah of the University of Ghana with 10 sites identified in Ahafo South area. The overall survey is presented in a report issued February 2008. The excavations undertaken at two sites in the Awonsu pit area are presented in a report issued in July 2008, which confirms the significance of these sites in terms of their association of peoples of Kintampo culture (3,000 – 4,000 years ago). Final mitigation of these sites with the salvage of the bedrock portions that could not be salvaged earlier was completed in December 2009.</p>	<b>No action Required</b>	<p>The Cultural Resource Management (CRM) Plan (Revision 1) prepared in February 2008 provides general guidelines for the identification of cultural properties and indicates that work will stop and appropriate procedures followed should chance finds be made. Deficiencies in implementing this CRMP are that field personnel do not have the training and procedures are not in place for this Plan to be implemented for chance finds. The CRMP also required the designation of an individual to be responsible for cultural resource management.</p> <p>A manager has been designated and training of staff to implement the chance finds protocols, scheduled to take place in February 2010.</p>



### ***Conclusion***

As a general summary, NGGL can demonstrate that plans are in place or corrective actions are ongoing to address the gaps previously identified where their operations are not fully compliant with IFC environmental policies and guidelines. There are no situations where a “critical action required for completion” has been identified. NGGL has dedicated significant resources to closing the compliance gaps identified from the fifth site visit.

### **List of Acronyms and Abbreviations**

ABMMP:	Ahafo Biodiversity Management and Monitoring Plan
ARD:	Acid Rock Drainage
AST:	Above Ground Storage Tank
BMP:	Biodiversity Management Plan
BOD:	Biological Oxygen Demand
CBOD:	Carbonaceous Biochemical Oxygen Demand
CCD:	Counter-Current Decantation
CI:	Conservation International
COD:	Chemical Oxygen Demand
CRM:	Cultural Resource Management
ECD:	Environmental Control Dams
ECMG:	External Compliance Monitoring Group
EHS:	Environmental Health and Safety
EMP:	Environmental Management Plan
ESIA:	Environmental and Social Impact Assessment
EPA:	Environmental Protection Agency
EPP:	Emergency Preparedness Plan
ERP:	Emergency Response Plan
ERT:	Emergency Response Team
ESAP:	Environmental and Social Action Plan
ESR:	Environmental and Social Responsibility
H&S:	Health and Safety
HSE:	Health, Safety and Environment
HSLP:	Health, Safety and Loss Prevention
ICMC:	International Cyanide Management Code
IFC:	International Finance Corporation
IMS:	Integrated Management System
IWMF:	Integrated Waste Management Facility
KPI:	Key Performance Indicator
LI:	Legislative Instrument
LTA:	Lost Time Accident
LTAFR:	Lost Time Accident Frequency Ratio
MSDS:	Material Safety Data Sheet
MoC:	Management of Change
NGGL:	Newmont Ghana Gold Limited
NGO:	Non-Governmental Organization
OHS:	Occupational Health and Safety
OP:	Operational Policy
OPN:	Operational Policy Note
PPAH:	Pollution Prevention and Abatement Handbook
PPE:	Personal Protective Equipment
ROW:	Right-of-Way
SEG:	Similar Exposure Group
SOP:	Standard Operating Procedure
SSV:	Senior Staff Village
STP:	Sewage Treatment Plant
TRAFR:	Total recordable Accident Frequency Ratio

TSF:	Tailings Storage Facility
TSS:	Total Suspended Solids
VRA:	Volta River Authority
WAD:	Weak Acid Dissociable
WSF:	Water Storage Facility
WB:	World Bank
WHO:	World Health Organization