

Newmont Ghana Gold Ltd.

Environmental and Social Impact Assessment

Public Consultation

Comment Response Document

Ahafo South Project

January 2006

**Brong Ahafo Region
Ghana
West Africa**

INTRODUCTION

Newmont Ghana Gold Ltd. (NGGL) has compiled information included in this document to address comments received during the 120-day Public Consultation and Disclosure period related to the Ahafo South Project. The Ahafo South Project documentation was initially disclosed on August 30, 2005. Comments have been categorized into two main areas including: 1) social, and 2) environmental.

NGGL's responses provide information and clarification as to the procedures, methods, data, and criteria NGGL has employed in planning and designing the Ahafo South Project. Although some commenters may have differing opinions as to the adequacy of NGGL's efforts with regards to public outreach, social issues, engineering design, and environmental controls, NGGL believes that it has used baseline data (both social and environmental) to guide the project development in a responsible manner consistent with requirements of the Ghanaian EPA, World Bank – IFC, and Newmont's policies.

COMMENTS AND OBSERVATIONS

Comments have been reviewed and organized by subject matter within the two primary areas of interest. All responses are therefore subject-matter based rather than specific to each comment received to avoid duplication and with the intent of providing concise and accurate responses to the extent practicable.

SOCIAL ISSUES

PUBLIC CONSULTATION OF PROJECT RELATED INFORMATION

Document Availability

Physical Locations

The primary project documents including the Resettlement Action Plan (RAP); Environmental and Social Impact Assessment (ESIA); Public Consultation and Disclosure Plan (PCDP); and Independent Assessment of Resettlement Implementation were all officially and ceremoniously presented between August 30th and September 15th to the Traditional Councils of Kenyasi No. 2, Kenyasi No. 1, Ntotroso and Wamahinso as well as the Asutifi District Assembly. NGGL recognized the importance of broad community access to the documentation and focused on a locally appropriate communications strategy that identified highly frequented and accessible locations in which to locate key documents, including:

- Regional Coordinating Council and office of the Regional Minister;
- Environmental Protection Agency (EPA);
- Town and Country Planning (T&CP);
- Land Valuation Board (LVB);
- Sunyani Public Library;

- Radio BAR;
- Nananom FM; and
- NGGL Office-Kenyasi.

Similarly, the primary documents were made progressively available at strategic locations to increase availability to interested persons in locations frequented by the local populations including the following:

- NGGL Public Information Offices at Kenyasi No. 2, Kenyasi No. 1, Ntotroso, and Wamahinso;
- Local NGO office of Guards of the Earth and Vulnerable; and
- Regional Stool Lands Administration office – Sunyani.

Secondary project documents including the Twi translation of the RAP Summary, Twi Translation of the ESIA Summary, Guide to Land Acquisition and Compensation for Exploration Activities (GLAC), and the Social and Community Development of the Ahafo Region Collaboration to Promote Project Benefits, Vision, and Commitments were similarly available to local public access at all the same above mentioned locations (as per the primary documents) during the period between October 27th and November 10th, 2005. And as required, these secondary documents have been progressively placed at other strategic locations to increase the availability to local populations including the following:

- NGGL Public Information Offices at Kenyasi No. 2, Kenyasi No. 1, Ntotroso, and Wamahinso;
- Local NGO office of Guards of the Earth and Vulnerable; and
- Regional Stool Lands Administration office – Sunyani.

The Community of Gyedu, represented by the Gyedu Traditional Council, within the Project area initially refused to accept the primary documents when they were presented to them on September 2, 2005. The primary reasons for this were:

- They believed that NGGL was not engaging with them in the same way that it was engaging with other Traditional Councils and communities in the area;
- They were supposedly informed that Gyedu and related land areas were not part of the project area;
- They were not aware of NGGL's activity; and therefore, could not accept the documents; and
- They believed the Ntotroso Traditional Council had prevented them from getting project benefits and believed that they were not being adequately represented in dealings with NGGL.

A representative of Gyedu Traditional Council, who had attended all the meetings with NGGL along with other community representatives, was present and remained quiet throughout the attempt to present the documents. The reasons stated above were received by NGGL representatives and extensive consultation was undertaken with the Gyedu Traditional Council members and other key representatives. Consultation was conducted to find out why reasons listed above were given when NGGL had not treated the Gyedu Traditional Council and community different than other communities within the Study Area. Gyedu land is located within the Mining Lease but is not within the Mine Area being compensated.

After extensive consultation from September 3, 2005 to November 8, 2005, the Gyedu Traditional Council came to realize that they had been misinformed by their own representatives and in response, they sent two separate delegations to apologize to NGGL through the External Affairs Department and to request that they be provided with the documents. The primary and secondary documents were presented to the Gyedu community through the Gyedu Traditional Council on November 9, 2005 and arrangements were immediately made for an information center to be set up. A dedicated Public Consultation Officer put forward by the Community was hired and started work on November 29, 2005. The role of the officer is to work with the community at the Gyedu Information Center (which was officially opened on December 20, 2005) to disclose the contents of the documents. Prior to establishment of the Gyedu Information Center, citizens of Gyedu had free access to the information center at Ntotroso and would have known of the documents through the various consultations in Ntotroso and the community groups in the area because Gyedu and Ntotroso are very integrated and are physically connected and one continuous community.

Web Site Posting

Primary and secondary project documents were posted on IFC and Newmont hosted Web Sites beginning on August 29, 2005. Copies were presented to the following Brong Ahafo Regional locations during the same period of August 30th to September 15th.

Local Radio Announcements

Beginning second week in September 2005 until mid December 2005 (total of 14 weeks) the two most listened to radio stations in the Ahafo area, namely BAR radio in Sunyani and Nananom FM in Goaso have carried informational messages to the public advising of the existence of the Primary Documents. These messages were aired by each radio station at peak listening periods 3 times a week for the first 6 weeks followed by once a week for 4 weeks and 2 times a week for the remaining 4 weeks. For each radio station, this equates to a total of 30 informational messages over 14 weeks.

NGGL initiated an interactive talk show (once per week on two local radio stations) beginning in October 2005 to further clarify project documentation. The call-in radio shows provided a summary of different aspects of the project during each broadcasting period followed by a public call-in for a public question and answer period. All communications were conducted in the appropriate local Twi language. The interactive talk show was aired each week from first week in October 2005 through mid December 2005. NGGL maintains a database of the radio discussion synopsis for each of the eight weeks of interactive talk show representing the information that was broadcast during the talk show. Also included in the database are the questions asked by those calling in to the talk show as well as the answers that were provided to the caller's questions and this information is publicly available.

Project Related Community Consultation

Public involvement with the Ahafo South Project began in March 1998 at a community meeting, or “durbar” in Ghana, held in Bechem. The meeting participants included Assemblymen/women, Chiefs, Elders, farmers, and other interested parties regarding development of the Sefwi Belt and Ntotoroso Gold Projects. Numerous formal and informal meetings followed and continue to the present time. A summary of public meetings (including minutes and list of attendees) are available for further review.

Project related community consultation efforts were formally focused on the primary communities located in and around the Project area. In addition, outreach efforts were conducted on an ongoing basis from September through December to ensure informal information inquiries were addressed.

NGGL developed a series of Public Consultation Officers and Public Community Outreach officers to conduct consultation efforts and address community based questions. The formal outreach efforts were conducted in communities specified below and focused on specific authorities, established groups, and organizations within each community area.

Community	Authorities/Established Groups/Organizations
Kenyase 1	Traditional Authorities Churches: Catholic; Methodist; Pentecostal; End Time; Deeper Life; SDA Groups: Catholic Women’s Association; Catholic Youth; Seamstress Association; Carpenters Association General: Youth Associations; Traditional Leaders; Muslim Association Surrounding Communities: Abeykrom; Donkorkrom; Agyeikrom; Kwamiu #2; Bogyampa; Nfahumfaka; Adukrom
Kenyase 2	Traditional Authorities Churches: Catholic; Methodist; Pentecostal; End Time; Deeper Life; SDA; Assemblies of God; Churches Council (body representing all denominations). Groups: Catholic Women’s Association; Catholic Youth; Seamstress Association; Carpenters Association; Resettlement Village; Ghana Private Roads Transportation Union (GPRTU). General: District Assembly; Youth Associations; Traditional Leaders; Muslim Association. Local Radio Broadcasts on FM Paradise Information Center <ul style="list-style-type: none"> • Live program twice weekly 6-7:30 pm • Provide Project information and education about documents • Live phone-in Surrounding Communities: Kodiwhia; Dokyekrom/Tutuwaka.
Ntotoroso	Traditional Authorities Churches: Grace Church; Catholic; Methodist; Pentecostal; End Time; Deeper Life; SDA. Groups: Moslem community; Secondary schools. General: Youth Association; Traditional Leaders. Surrounding Communities: Yawusokrom; Manu Mayden Shed; Nkrankrom; Manushed.
Wamahinso	Traditional Authorities. Churches: Church of God; Christ Apostolic Church. Groups: Gyamfi Kumanini Secondary School. General: Youth Association; Traditional Leaders.
Gyedu	Traditional Authorities

Public Consultation Officers were located in five main local communities beginning during the first two weeks of September 2005 to provide direct and ongoing project-related information. Public Consultation Officers focused primarily on providing the following types of information:

- Existence of the project documentation;

- Content of the documents;
- Ways and means to access project documentation; and
- Receiving questions and providing feedback to the general public during direct interaction with individuals and community groups.

The Public Community Outreach teams were responsible for disseminating information including publicly released documents about the Project to affected communities; educating affected persons about the Project and Project-related public documents; engaging and interacting with communities regarding Company affairs; and responding to questions and queries from the community with respect to the public documents and any other questions people may have about the Project.

The Public Community Outreach teams presented information to Project-affected communities concerning the RAP, ESIA, PCDP, and Independent Evaluation beginning in October 2005 once communities were aware of the document availability and the consultation process.

Public meetings were well received with attendance ranging from 15-80 people depending on the venue. Questions raised at Project/document presentations are all recorded and questions that Public Community Outreach teams are unable to answer were taken back to Company management to answer at subsequent public venues. Typical questions ranged from specific questions on documents to general questions about the Project. Public Community Outreach teams categorize questions according to resettlement, environment, community development, and public relations.

Video presentations of the documents in Twi were produced and were planned for showing during December 2005 including explanations of Project and Project documents (*e.g.*, ESIA, RAP, PCDP, and Independent Evaluation). However, due to events in the communities, this is rescheduled to be done during January 2006. Various public meetings have also been videotaped to ensure quality and occurrence of presentations.

EIA Public Hearing

In March 2004, Ghanaian EPA (2004) informed NGGL that changes arising from integration of the Ahafo Project and revised Project design as a result of NGGL's studies would require submittal of an updated EIS that addressed the project modifications. Primary modifications NGGL made to the existing mine and reclamation plans was to combine two mine concessions into one operable line unit. The modification also addressed additional resource information collected since transfer of ownership to NGGL, and NGGL's interest in seeking increased efficiency in overall project development and enhanced environmental design safeguards. An EIS addressing these changes was prepared and submitted to the Ghanaian EPA in September 2004 (SGS 2004).

On 23 November 2004, an Environmental Protection Agency Public Hearing for the Project Environmental Impact Statement was held at the Asutifi District Assembly. All Project stakeholders including project-affected community members, paramount and autonomous Chiefs, members of the District Assembly, and regional and national department heads were present to review the EIS. The Ghanaian EPA was present to receive comments for review before approval. Comments were reviewed by EPA and NGGL with concerns addressed in the

EIS. The Ghana EPA issued Environmental Permit No. EPA/EIA/143 for the Ahafo South Project in April 2005. Following the review period, the EIS was incorporated into the final ESIA version.

Copies of environmental documents listed above are available for review at the NGGL Ahafo South Project Public Outreach Office located within the NGGL Kenyasi office complex. Staff is available to answer stakeholder questions and to translate documents for interested stakeholders.

TRAINING AND CAPACITY BUILDING

The NGGL Ahafo Project has, from the beginning, established a clear policy and commitment towards, “...*maximizing LOCAL employment and local business opportunity while ensuring operational and business objectives are met*”. The definition of “local” includes those communities within the Project operational area that meet the following description:

- A community that is physically located on the Mining Lease of NGGL within the current operational area of the Ahafo Project or within the area of the Mining Lease under active exploration; and
- A community / traditional area that has a significant amount of its traditional land covered by the Mining Lease of NGGL within the current operational area of the Ahafo Project or within the area of the Mining Lease under active exploration.

Prior to beginning construction, NGGL established an unskilled labor pool of local people to meet unskilled labor requirements. For purposes of this pool, NGGL set a target of hiring 100% of unskilled labor positions from this area.

NGGL collaborated with community leaders to establish a population-based quota system consisting of a percentage of unskilled jobs to be allocated through the labor pool to every local community in and around the Mine Area. NGGL communicated its’ plan to employ as many local people as possible throughout the local area and solicited applications from interested people. In all, NGGL received 13,223 applications.

NGGL asked all interested local applicants to obtain verification from their respective community leaders that they were legitimately “local”. NGGL screened verified applications and identified a short-list of applicants consistent with the quota system. These verified, short-listed local applicants were then asked to undertake a very basic skills test and a “fit for work” medical examination. Selected individuals were enrolled in a three-week work-orientation training program.

Successful graduates of this program form the unskilled labor pool and are offered employment by NGGL and contractors on an as-needed basis. As their contracted employment finishes, they are then re-circulated through the labor pool. NGGL draws 100 percent of its unskilled labor positions with workers from this pool and requires all contractors to do the same. The total number of unskilled job positions in the construction phase varies at any given time. The unskilled labor pool has now reached a peak of 722 individuals to meet the project’s unskilled labor requirements active work positions.

For semi-skilled and skilled jobs, priority is given to local job applicants over non-local applicants with the same skills and abilities to maximize employment of local people. However, selection of

qualified locals is based on skills and not on the quota per community protocol as for unskilled labor positions.

NGGL's hiring practices are designed to maintain a balance with the local communities. The following Table represents the most recent employment characteristic of the Project.

Manpower Type	Number of Positions	% of Total
Unskilled Labor Positions		
Local	471	100%
Non-local	0	0
Sub-Total	471	
Semi-Skilled and Skilled Labor Positions		
Local	833	30%
Non-local	1,973	70%
Sub-Total	2,806	
Manpower Totals		
Local	1,304	40%
Non-local	1,973	60%
Grand Total	3,277	

The national workforce for construction and development of the Ahafo Project has been over 3,200 people. Workforce requirements will be reduced to nearly 700 direct Newmont employees and just over 550 contracted personnel during the operational phase.

For ongoing mine operation, recruitment is currently underway by all operational departments. With experience drawn from the construction phase and with analysis of the operational positions, the Ahafo Project has committed to employ local people to represent 35 per cent of the operational Ghanaian workforce by July 2006.

During the transition from construction to operations, Newmont will train 90 local personnel selected from the local semi-skilled workers, labor pool personnel, and community skills inventory listing for trainee operator positions and a mechanical and electrical apprenticeship program. Local personnel will be selected for full time positions in operations based on their skills, work ethic, and performance shown during construction.

Work conducted during the construction and development phase of the Ahafo South Project is and has been on a contract basis. During this time period, local personnel have had opportunities to work with project contractors and/or NGGL directly to demonstrate the skills, work ethic, and performance to be selected for full-time positions during operations. Skill requirements for construction differ in many areas to those skills needed for mine operations and as indicated, the numbers of jobs available are reduced during mine operations phase as compared to the construction phase.

A program titled "Integrated Community Centers for Employable Skills" program was created and started in 1989 by the Government of Ghana, Minister of Manpower, Employment, and Development with support from UNICEF. An Integrated Community Center for Employable Skills training center is located in the area of the Ahafo Project in the community of Gyedu. This training center includes six large classroom blocks, office space, and surrounding land for

demonstration training. A Memorandum of Understanding was signed between Opportunities Industrialization Center International (OICI) and representatives of the Integrated Community Centers for Employable Skills for the Gyedu center to be rehabilitated and managed under the guidance of OICI while using the existing Government of Ghana staff as trainers. This program is part of the NGGL Livelihood Enhancement and Community Empowerment Program (LEEP).

The LEEP program will replicate the OICI vocational training center model adopting an approach called "Training for Employment and Enterprise Development". As a component of the training, the center will target income-generating activities geared at providing practical hands-on training as well as creating new and expanded existing enterprises in the area that could support mining operations and other future business development in the area.

The existing Integrated Community Center for Employable Skills center is currently being rehabilitated and preparations are underway to have an initial enrollment of up to 150 local Project-affected youth in training within the next three months. These initial trainees will be offered training in areas such as tailoring, masonry, carpentry, electricity, driving, and catering. Training is designed to be completed in the shortest timeframe possible but will likely require from 3 months to a maximum 12 months depending on the skill.

In February 2004, NGGL opened a National Technical Vocational Training Center in Yamfo to provide education and training for employment at the Project or other employment opportunities in the area. By August 2005, 696 local people had completed work orientation training and entered the semi-skilled labor pool and 314 people completed semi-skilled training in metals, administration, and masonry subjects. Additionally, NGGL has entered into a Memorandum of Understanding with the National Vocational Training Institute to provide training support and infrastructure improvements to the existing facility.

NGGL is committed to adhering to the philosophy of sustainable mining: Projects which meet the needs of this generation while ensuring the ability of future generations to meet their needs (White 2003).

RESETTLEMENT AND RELOCATION

NGGL has undertaken a comprehensive suite of consultation, disclosure activities, and stakeholder engagement exercises since acquiring the Ahafo concessions in 2002. All Project stakeholders – individuals, groups, and organizations with an interest in the Project or that may be affected by the Project have been actively engaged in the consultation process. Workshops, briefings, and educational programs on the Project have been provided to local community groups; international, national, and local government agencies; and environmental groups, human rights groups, non-governmental organizations, and media organizations. In addition, specific engagements have involved local stakeholders during the crop and resettlement negotiations process and public hearings to discuss issues related to the environmental impact assessment. NGGL is complicit with resettlement best practices established in IFC's Operation Directive 4.30 on Involuntary Resettlement.

In March 2004, the Community Relations and Development Department initiated a series of consultations on resettlement. The meetings were either community education meetings or focus group meetings. Community education meetings were held in a town or village and open to the public. Focus group meetings targeted specific groups and organizations (such as a

dressmaker's association, football teams,). The meetings provided residents with information ranging from resettlement negotiations to community development.

NGGL and their consultants employed a variety of innovative communication techniques and tactics including interactive use of traditional channels of communication, local theatre, and puppetry. NGGL initiated radio programming based on communications research including audience channel analyses and knowledge, attitudes, and perception studies. These approaches were focused on ensuring that audiences at varying literacy levels could understand and participate in discourse about project related activities.

NGGL facilitated formation of a multi-stakeholder Resettlement Negotiation Committee (RNC), which includes representatives of Project-affected communities, traditional authorities, district and regional government, non-governmental organizations, and NGGL. The members were not appointed by NGGL but in the fashion of the established socio-political structure, which includes institutions of modern government, traditional government, and community organization – such as town, neighborhood, and youth meetings.

NGGL introduced the concept that stakeholder groups should elect individuals as their representatives to assure stakeholders of a consultative and collaborative approach to conflict resolution free from coercion and based on informed consent. Representatives to the various stakeholder committees were elected by acclamation during community gatherings and group meetings. NGGL observed these meetings to ensure elections of representatives were fair and transparent, and that the election process had widespread public support. After election and presentation of representatives, NGGL asked groups to confirm that their representatives were general advocates of the views by issuing Authorization for Representation Forms, which members of each group signed and submitted to NGGL. During initial Resettlement Negotiation Committee meetings, Mr. Ernest Owusu Poku, former Inspector General of Police, was nominated Chairman.

Negotiations are the heart of public participation in resettlement planning and implementation. Twenty-two formal stakeholder consultation meetings occurred regarding resettlement. These meetings achieved the following:

- Provided information about the Project to stakeholders;
- Responded to questions and recorded concerns;
- Notified stakeholders that a collaborative negotiation process would be undertaken to develop compensation policies, procedures, and rates and that they should elect representatives to participate on their behalf (prior to Feb 2004); and
- Created understandings and consensus around agreements reached by the RNC.

Consultations and information disclosure activities on resettlement and compensation involved a mix of formal RNC meetings and extensive informal dialogue with stakeholders by the Resettlement Negotiation Team (External Affairs) as part of their regular visits to communities. Throughout negotiations, information was disclosed transparently and in a manner consistent with local cultural norms. A wide range of Project stakeholder expertise was used to resolve issues and overall resettlement planning, fostering a broad sense of ownership in the process.

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The members were not appointed by NGGL but in the fashion of the established socio-political structure, which includes institutions of modern government, traditional government, and community organization – such as town, neighborhood, and youth meetings. During initial Resettlement Negotiation Committee meetings, Mr. Ernest Owusu Poku, former Inspector General of Police, was unanimously selected as Chairman. Negotiations are the heart of public participation in resettlement planning and implementation.

Initially, consultation meetings were held in towns and villages to explain the mandate of the RNC and the process involved in negotiation. Project-affected households were made aware they should choose representatives who would best communicate their position. After the consultation meetings, local authorities called a general election day for each specific region. On Election Day, residents met in a general assembly and were asked to nominate a representative present at the meeting. Nominees were then identified and people were asked to identify their preference in a head count. The nominee with a majority was elected as a representative. Representatives were elected by acclamation during community gatherings and group meetings. NGGL observed these meetings to ensure elections were fair and transparent. The election process had widespread public support. After the election and presentation of representatives, NGGL asked groups to confirm that their representatives were in fact genuine advocates of the views of their members. Authorization for Representation Forms were issued to, all members of each group and signed and submitted to NGGL.

After selection of representatives, NGGL asked all Project-affected persons to confirm that their representatives were in fact genuine advocates of the views of their members. Authorization for Representation Forms, were issued to all members of each and group signed and submitted to NGGL.

RNC meetings were effectively public as community members would gather outside the meeting room and listen. RNC representatives were encouraged to keep their constituents informed. Meetings were conducted no more frequently than once a week, so representatives had ample opportunity to consult broadly with their constituents. Initially, NGGL expected that all RNC agreements and information would be shared by Resettlement Negotiation Committee representatives with their constituents. However, it soon became apparent that contentious issues, especially establishment of an entitlement cut-off date, were often not adequately shared and explained. As a result, the task of informing and debating some issues devolved to NGGL community relations staff, OICI, and members of the Youth Task Force working with individual or small groups of impacted persons / households in the field and in the office on a daily basis.

Formal meetings with a broad range of stakeholder groups continued outside of the RNC process. NGGL also enhanced its grievance administration by: (a) increasing effort to resolve verbal and written complaints and grievances brought to the Kenyase office, (b) discussing grievances and personal complaints in the RNC, and (c) responding fully and openly to the Commission on Human Rights and Administrative Justice (CHRAJ) and more formal court proceedings.

Planning and Design of Resettlement Villages and Houses

NGGL has developed resettlement planning as a collaborative process. Resettlement principles, policies, procedures, and rates have been determined through multi-stakeholder involvement in the RNC. This committee includes representatives of Project-affected people, households, traditional authorities, district and regional government representatives, non-governmental organizations, and NGGL.

NGGL has undertaken a comprehensive suite of consultation, disclosure activities, and stakeholder engagement exercises since acquiring the Ahafo concessions in 2002. All Project stakeholders – individuals, groups, and organizations with an interest in the Project or that may be affected by the Project have been actively engaged in the consultation process. Workshops, briefings, and educational programs on the Project have been provided to local community groups; international, national, and local government agencies; and environmental, human rights, non-governmental, and media organizations. In addition, specific engagements have involved local stakeholders during the crop and resettlement negotiations process and public hearings to discuss issues related to the environmental impact assessment. NGGL is complicit with resettlement best practices established in IFC's Operation Directive 4.30 on Involuntary Resettlement.

NGGL, in consultation with the RNC, has planned and constructed two resettlement villages. This section provides an overview of the site selection process and the physical specifications of the resettlement villages.

In March 2004, the RNC established a Site Selection Committee. Since its formation, the Site Selection Committee has had four assignments as listed below:

- Site selection for resettlement villages and review of ongoing planning and engineering;
- Review of resettlement house designs and plot layouts;
- Determination of eligibility for relocation, both the implementation of an overall policy and the approval / denial of applicants for relocation; and
- Management of speculative activities.

The Site Selection Committee is not a final decision-making body. The Committee presents its findings to the RNC for review and approval.

Several RNC meetings, specifically on the 12 and 26 of March 2004, discussed resettlement site alternatives and housing designs. NGGL and the Site Selection Committee jointly selected two preferred alternatives: Alternative 1 (Ntotoroso South, hereinafter referred to as the "Ntotoroso Resettlement Village") and Alternative 7 (Kenyasi 2 West, hereinafter referred to as the "Kenyasi 2 Resettlement Village"). These alternatives were agreed to by the entire RNC. Several RNC meetings, specifically meetings held on March 12 and 26, 2004 discussed resettlement site alternatives and housing design.

Participation in Resettlement

One of the primary objectives of the development of the Ahafo Project has been to minimize land take and to evaluate all reasonable means to avoid displacing people. The land take for the

water storage facility was done such that sufficient land was acquired for the water body itself plus a buffer zone around the area of the water body. The land beyond this buffer zone is not needed by the Ahafo Project and therefore, was not included within the Mine Take Area for the Water Storage Facility to both avoid displacing people from existing homes and to avoid disrupting crop production from previously established and active fields.

The Water Storage Facility is located in approximately one half of the Subri River catchment area in a valley between the communities of Dokyekrom on the south and Yawusukrom on the north. Dokyekrom has a feeder road connecting it with the main access road of Kenyasi to Ntotroso. Yawusukrom has a feeder road connecting it with the main Ntotroso to Sunyani road. The formation of the water storage facility has resulted in the flooding of the valley and thus impacting remaining residents in the vicinity of the Water Storage Facility. Due to these impacts, NGGL has met with residents residing near the Water Storage Facility and collectively agreed and committed to the following activities.

- Construction of a reservoir perimeter road to facilitate local vehicle and pedestrian access;
- Construction of eight enclosed hand dug wells with hand pump around the perimeter of the reservoir to facilitate and improve farmers and residents access to potable water;
- Establishment and election of a Reservoir Committee to represent interests of farmers and residents living and farming around the perimeter and in the vicinity of the water storage facility. This committee and NGGL are working closely to agree and coordinate current and proposed development activity, coordinate safety awareness and messages, participate in planning socio-economic development of the area in the areas of education, agriculture, improvements to health;
- Development of fish farming in the water storage facility through stocking of the reservoir and training (fishery enterprises will be exclusive to those farmers and residents around the perimeter of the reservoir; and
- Monitoring of reservoir community to track standard of living.

It is of utmost importance to NGGL to minimize impacts to people and communities to the extent possible and this will continue to be a key objective into the future. However, NGGL also recognized the importance of establishing relationships with all communities in the project area to collaborate and promote opportunities for shared benefits.

CROP COMPENSATION

NGGL and the local communities have collaborated on crop compensation transactions beginning in the year 2000 associated with exploration activities and related impacts. From 2000 to 2003, NGGL and the community collaboratively established crop compensation rates in consultation with a multi-stakeholder negotiating body, comprising representatives of traditional authorities, chief farmers, impacted farmers, the Land Valuation Board, and the Stool Lands Administration. NGGL respected the agreed rates and completed numerous compensation transactions with area farmers for any crop losses related to exploration activities. Annual adjustments to specific rates, if deemed necessary, were negotiated on the basis of changes in local market crop prices and other economic conditions.

Beginning in January 2004, it was collectively agreed that crop compensation would be renegotiated through the Resettlement Negotiation Committee (RNC) that represented Project-affected people and communities, traditional authorities, district and regional government, non-governmental organizations, and NGGL. The majority of the RNC members and participants are farmers and were representatives elected from the general population of which 95% of the homesteads in the Project Area practice subsistence and cash cropping on small holdings as their primary livelihood activity. The crop compensation rate agreements established in 2004 by the RNC represented a 5% increase over earlier negotiated and represented rates higher than those recommended by the government.

NGGL and RNC committed to reviewing the rates annually with representatives of farmers to account for changes in the macro-economic variables that are likely to affect both the farmer and NGGL. To ensure the most transparent, democratic, participatory and representative selection process for representatives, the following procedures/steps were adopted as an ongoing continuous improvement in soliciting farmers representation into a crop compensation rate review committee:

- **Zoning Communities** – the first step undertaken was to agree on a grouping of communities into six (6) **Zones** based on chieftdom and proximity to one another. For instance, Yamfo, Susuanso and Afrisipakrom were agreed to be in **Zone A** not because they fall under Yamfo Chieftdom, but because the communities are closer to one another and thus could promote interaction amongst themselves. All six (6) zones were agreed to in a similar manner;
- **Committee Size** – The second step was to decide and agree with community representatives the most manageable number of people to form the committee, both from NGGL, communities, including traditional leaders, and observers, including Local NGO's. It was agreed that the maximum number should not exceed sixty (60);
- **Establish Purpose** – The third step was to sensitize and educate the affected communities about: (1) the purpose of forming a committee to discuss/negotiate on a particular issue of mutual importance, such as crop rates review; (2) membership quota for each community and the basis of the quota; (3) need to nominate and elect a community representative into such committee to represent their voice; (4) need and benefit to fully participate in electing their representatives; (5) need to ensure that the election is free, fair and transparent and that no community leaders impose members into committees; (6) need to mandate (by signing authorization forms) their elected representatives to discuss/negotiate on their behalf with Newmont; (7) power to replace their elected representatives if found not to be serving the people who elected them; (8) power to demand full accountability from their chosen representatives; and, (9) need to accept the outcome of the discussion/negotiation in good faith. Newmont External Affairs Officers spent one month carrying out this sensitization program in all the affected communities;
- **Selecting Representatives** – The next phase of the RNC was for the communities to select representatives. Newmont External Affairs Officers visited the communities in each of the six zones on their scheduled election dates to observe and monitor the process of electing crop compensation rate review committee representatives. The objective was to ensure that community representatives were elected in a free, fair, transparent and democratic manner;

- Formalize Representation – The final step of the process was to finalize the participation process. After electing their representatives, all community members who participated in the election process signed a formal authorization form designed by Newmont, and which purports to solicit/seek the mandate of the people to enable NGGL go ahead to discuss/negotiate issues with them. Names and signatures of those who took part in the election were entered onto the authorization form.

Once representatives of the Crop Compensation Rate Review Committee of the six zones were elected a review and negotiation process began with NGGL on crop compensation rates to be used for the coming year. The process began on April 22, 2005 and was completed on May 31, 2005 with the result being an across the board increase of 10% on 2004 crop rates being agreed. During this review and negotiation period the elected representatives liaised directly with their communities to put forward their views and proposals for increased rates. Also agreed was that these increased rates would remain in effect for the next year.

NGGL and the communities established a process for the review and compensation of crops which has been active since 2000 and has recently been formalized in the “Guide to Land Acquisition and Compensation for Exploration Activities (GLAC)” which was publicly disclosed in Oct. 2005. The process used is summarized below:

- The NGGL Community Relations Compensation Officer, survey team and Chief Farmer locate and inform the farmer whose crop/farm may be affected. A date is agreed to visit the farm to measure the field and take inventory of the crops. (NOTE: No survey or inventory of crops can occur in the absence of the affected farmer or their nominated representative or until all reasonable effort has been made to locate a farmer. If the crop owner can not be located after all reasonable effort is made, the Chief Farmer may act on behalf of the farmer);
- The Survey team undertakes a physical measurement and survey of the field with the farmer providing the boundaries of his / her field;
- The survey of the field is input into the computer in mapping software to produce a plot of the fields;
- Once the plots of the fields are completed the NGGL Community Relations Compensation Officer notifies the farmer and the Chief Farmer of the date for final assessment of the field;
- The NGGL Community Relations Compensation Officer together with the farmer and the Chief Farmer visit the field to review and reach agreement on the crops that exist and will be qualified for compensation (i.e. crops planted after the agreed cut-off date would not attract compensation);
- When agreement is reached on the crop inventory, quantity and age are recorded on the field chit as agreed between the farmer and NGGL;
- This field chit is then signed by the Farmer, Chief Farmer and NGGL Compensation Officer and a copy provided to the farmer;

- The NGGL copy of the chit is used to process the arrangements for payment to the farmer; and
- Once money for payment for the chit is available at the bank the farmer is notified and uses the chit as proof of ownership and processing of the collection of his / her payment for the crops.

The Entitlement Cut-Off Date was a concept discussed and agreed upon in multi-stakeholder meeting dating back to 9 May 2003. During the last quarter of 2003 and especially after NGGL's decision to implement the Project, speculative crop planting and structure construction increased dramatically in the mine area, for the sole purpose of compensation. NGGL established a crop and building entitlement moratorium in order to cap speculation. Persons would be compensated for crops or buildings within the defined mine area, on or before the entitlement cut-off date. Persons would not be compensated for crops or buildings placed on the land after the entitlement cut-off date. This issue was publicly debated extensively in the RNC meetings.

At the inaugural meeting of 10 February 2004, NGGL proposed 28 December 2003 as the entitlement cut-off. December 28, 2003 was the date of satellite imagery of the Mine Area. At the following RNC meeting of 20 February 2004, the December date was rejected in favor of a contemporaneous date, namely 10 February 2004.

Non-eligibility for compensation is a constant source of friction, as many farmers aggressively demand that crops planted after the entitlement cut-off date are included in compensation calculations. The determination of whether crops are ineligible is made in the field by NGGL crop survey teams, in consultation with the farmer and Chief Farmer.

NGGL met with the local Youth Associations to attempt to find a solution to the speculative planting problem as soon as the issue was detected in an effort to be transparent and minimize conflict building generation. The Youth Association leaders recommended that a Task Force made up of representatives of the various Youth Associations should be formed to assist NGGL in convincing the farmers of the need to accept the agreed moratorium and stop planting new crops in the Mine Area to force NGGL to pay compensation. Formation and use of a Youth Association Task Force has generally been successful in limiting speculative planting.

ALTERNATIVE FARM LAND

NGGL recognizes the importance of arable farmland for area residents as a provision of food and income generation. Similarly, the negotiation and consultation phases completed during the last year have shown that replacement land for Project-affected sharecroppers and landowners was a concern often expressed by affected communities. NGGL has committed to work with Project-affected people, traditional authorities and communities to find a realistic strategy for affected sharecroppers and landowners to access replacement land.

NGGL has adopted a strategy and action plan in consultation with relevant traditional authorities to enable access to cultivated land within the Mine Area as a mechanism to achieve a balance between Newmont's Standard, Ghanaian law and practice, and the existing land tenure system in the Project area. Traditional authorities recognize the fact and have expressed concern that if NGGL were to attempt to replace land for land for all households with farm holdings in the mine area, it would create additional problems that could effectively destroy the

established mechanisms for land allocation. This could eventually result in unnecessary inflation of land prices in the area. Therefore, NGGL has committed to not directly purchase replacement farmland for economically displaced households.

Instead, traditional authorities have publicly stated and made it known to Project-affected persons/households that they, the traditional authorities, have land available for allocation for those that require land. Furthermore, they have encouraged farmers seeking land for agriculture to come forward for consideration. It should be noted that, quite apart from approaching traditional authorities, impacted farmers may be coping with cultivated land losses by clearing their own fallow land or by clearing fallow land held by members of their extended family. Approaching their traditional authority is only one of several coping mechanisms available to farmers.

NGGL and the local traditional authorities have identified a strategy to assist people in accessing available arable land on both a temporary and permanent basis. The strategies being used to ensure land access are discussed below and include the following:

1. Facilitation with Traditional Authorities
2. Temporary Mine Take Area Land Bank
3. Temporary Resettlement Area Land bank
4. Temporary/Permanent Land Bank External to Mine Take Area
5. Agricultural Assistance Program

Facilitation with Traditional Authorities

The Traditional Authorities of Ntotoroso and Kenyase have publicly stated that available surplus land will be made available to Project-affected people who do not have additional farm land outside the Mine Take Area. Based on this, NGGL's strategy for facilitating access to farm land for Project-affected people through traditional authorities is to:

- Organize the grouping of farmers who have been compensated and have lost land through the development of the Project. Traditional authorities have stated that they support grouping of farmers for land allocation purposes, rather than dealing with single farmers one at-a-time. Identification of landless farmers will in part occur through LEEP evaluations, which offer a combination of agricultural inputs (e.g., training, seeds, livestock) for those who have land or assistance in clearance of fallow land for those farmers who may have lost cultivated land and are now landless;
- Group farmers under a village traditional leader (e.g. Chief of Kwakyekrom or Chief of Kodiwohia) so that these leaders, together with the farmers seeking land, would approach their respective traditional authorities to present their needs for land in hectares per farmer and proposed use of the land;
- Assist in land allocation to the landless by the traditional authorities and NGGL to these farmers by providing traditional facilitation fee, registering farmers and ensuring any ongoing land use agreement, such as sharecropping, is negotiated in good faith; and
- Assist traditional authorities to identify landowners (i.e., other than Royal Land or other land owned by traditional authorities) in the area that have surplus land.

Temporary Mine Take Area Land Bank

While 1,701 households have been directly impacted by the Project, often these impacts have not yet materialized as NGGL may not be currently using all canes within the Mine Take Area. NGGL clears and uses land for which it has compensated on an as needed basis. Therefore, large portions of the Mine Take Area that will not be operational for several years and can potentially remain in agricultural use under strict control agreements with farmers. As a result, NGGL is developing a temporary land bank consisting of 900 acres that will be made available to impacted households on a short-term and carefully controlled basis. The land area will gradually be reduced as Project-affected people find permanent land for farming and as the active mine area expands or until the end of 2007.

NGGL has until January 2006 responded to requests from farmers who have already received compensation for crops in the Mine Take Area such that they could continue to harvest from land that is now under control of NGGL according to the terms of its Mining Lease. Now that mining has started in January 2006, any ongoing harvesting of crops is being very strictly controlled due to safety considerations, as heavy equipment is moving within some areas of the Mine Take Area. The modalities for land use within the Mine Take Area Land Bank are currently being finalized such that land for the landless can be allocated as needed prior to the next farming season. Basic principles of the process for use of the land within the Mine Take Area Land Bank on land controlled by NGGL are listed below:

- Farmers make a request to continue harvesting crops on previously used fields or to continue using those fields for the next farming season;
- Land surveyors verify location and land condition with the farmer; and
- Lease is developed between NGGL and the farmers that allow the farmer to continue crop harvest or use the land. As a condition of use, farmers must sign a lease with NGGL that communicates clearly that use is for a temporary basis and that farmers will not be compensated in the event of a loss of crops.
- The farmer must be actively searching for land outside of the Mine Take Area to which they will eventually move.

Temporary Resettlement Village Land Bank

Land is also available in the resettlement villages of Kenyase (Ola) and Ntotoroso in areas which have a designated use but will not be occupied for several years until the Project has matured. Land not currently occupied can be available for agricultural use on a temporary basis.

Land in the resettlement villages not formally transferred to resettlers, businesses, or civic authority is owned by NGGL. It is these land tracts that would form working agricultural lease holdings in the resettlement villages. The land allocation process will be implemented in the following manner:

- OICI will identify those farmers that did not acquire access to land through traditional authorities;

- Land not used in the resettlement villages will be identified and mapped according to anticipated use;
- Available land will be divided up into agricultural plots;
- Each plot will come with a timeframe of use similar to the lease used for facilitating land access in the Mine Take Area; and
- Use of the land is contingent on households actively searching for land outside the Resettlement village and Mine Take Area.

Temporary/Permanent Land Bank External to Mine Take Area

NGGL and the traditional authorities have developed an agreement to collaboratively establish a land bank, land allocation review committee, and land management system to ensure Project-affected people have access to land. It is expected that people using land on a temporary basis will be able to negotiate with the traditional authorities for long-term use of land allocated through the system.

Specific land areas will be identified and demarcated into agricultural plots which can be assigned to individual farmers. NGGL will provide both technical and financial support to develop, implement and monitor the land allocation system with full participation and leadership from traditional authorities. The Land Allocation Committee will be established to review/verify individual needs for land to ensure those truly in need are prioritized.

Agricultural Assistance Program

An agricultural assistance program will be established to assist landless Project-affected people in initial preparation of available temporary/permanent land allocated via the Land Allocation Committee or via NGGL's temporary land use. Basic assistance which will be available includes manual clearing of land, assistance with inputs of seeds and seed materials, and technical assistance and agricultural extension services to facilitate initial production efforts.

Land Access Monitoring Program

Monitoring the effectiveness of the above strategies are critical to ensuring Project-affected people have adequate access to land resources. Through the monitoring program, NGGL will track those households for which alternate land does not become available. NGGL has not inventoried the total landholdings of resident and non-resident households, (i.e. external to Mine Take Areas) which may be available for use. Therefore, it is difficult to determine relative significance of lands access loss related to the Mine Take Area.

In order to track the local customary land exchange process, NGGL has established a monitoring program to track individual landowners and sharecroppers involved in the customary land exchange process. Results of the monitoring program will allow NGGL to identify and track those that do not appear to be coping well. A main component of the monitoring program will include twice yearly land acquisition surveys to assess overall landholdings and OICI monitoring of Project-affected households to track agricultural livelihood restoration.

NGGL has identified Facilitation of Access to Arable Land as a key indicator that will monitor company facilitated land acquisition according to number of persons and parcel, by area. NGGL will monitor land acquisition in twice yearly surveys of landowners and sharecroppers. Land access problems relating to income loss and quality of life will also be assessed during the quarterly socio-economic survey by Opportunities Industrialization Centers International-OICI.

NGGL has committed to maintain and expand as required the existing monitoring of impacted farmers to determine the following conditions:

- Farmers who are interested or are in need of additional land for agriculture;
- Farmers who have lost all their farm land to the Project;
- Opening of fallow land outside the Mine Take Area and whether it is impacted farmers who are opening up this land or other locals or immigrants;
- Constraints, real and perceived, to acquiring land for agriculture;
- Use of crop compensation money and its effectiveness in establishing income generating capacity in agriculture or alternative income generating enterprises;
- Potential means to support the traditional authority and family land allocation system; and
- Abuse by traditional land owners of the land allocation process.

IMPACT MITIGATION MEASURES

Alternative Livelihoods

OICI designed a Project-specific Livelihood Enhancement and Community Empowerment Program (LEEP) based on the census and socioeconomic survey the NGO-partner performed in 2004 to mitigate the loss of future income from farming and improve the livelihood of those affected by resettlement. LEEP Phase I, launched February 15, 2005, is a comprehensive 18-month program that is the initial phase of a larger 5-year development plan that will be implemented when mine operations start in July 2006. The goal of LEEP is to improve livelihood security and quality of life to residents of towns and surrounding rural communities in the Study area directly and/or indirectly affected by the Project.

Monitoring and evaluation are an integral part of the LEEP Phase I activities. Design of the project provides a logical framework that links project activities to expected results, which in turn relate to LEEP objectives and overall goal. The design also contains impact indicators that help measure progress toward achieving results. Tracking Project impact and follow-up is the responsibility of all staff assigned to the Project. OICI staff will visit sites and stakeholders associated with the Project to interview, survey, and evaluate progress.

Livelihood Planning

The LEEP program has a broad range of activities offered to Project-affected households. These activities attempt to broaden the knowledge base of the affected population by information

sharing and training targeted to both create efficiencies in current livelihood practices as well as to diversify economic activity through the introduction of new livelihood activities. The LEEP program targets mine related income generating activities and technical training.

The following major components have been identified as requirements to reduce poverty in the Study Area:

- Small scale processing and storage;
- Income generating activities;
- Increased agricultural production and associated infrastructure; and
- Access to credit.

Both LEEP Phase One and Two programs and activities are discussed in detail below.

Improve sustainable food and cash crop production among 750 farming households.

- Training of 750 farmers in sustainable crop production systems including provision and facilitation of access to agricultural inputs, equipment and tools;
- Training in participatory farm management and agri-business development and marketing; and
- Training of cocoa farmers in sustainable production methods, technologies and marketing.

Reduce post-harvest and storage losses for 750 households to %5.

- Training of 750 farmers in post-harvest handling and safe storage technologies for grains, tubers, and vegetables; and
- Construction of 250 household grain / produce storage structures and 1 community storage structure.

Create and strengthen small and medium size enterprises to generate income for 1,500 women and men.

- Money and financial management training for all compensated farmers;
- Entrepreneurial skills and business development training for 60 groups, or about 1500 clients;
- Training in micro-enterprise development, management and marketing development coupled with business development services, business planning advice and counseling;
- Formation of women, men and youth business groups for market and input access;

- Training of ten community livestock workers in animal husbandry and production; and
- Provision of improved breed animals for animal production.

Improve technical and organizational capacity among women

- Skills training in value addition and food processing and introducing appropriate technology that will save women time and energy;
- Training in income generating strategies that will target mainly women and adolescent girls; and
- Target women in the all its water and sanitation education and infrastructure provision programs.

Enhance technical and vocational skills for 600 youth for employment and self-employment.

- Provision of vocational skills training in areas such as tailoring, carpentry, masonry, block-making, driving, catering, computer, and office skills with basic literacy and numeracy;
- Technical skills training and appropriate technology transfer for rural processing and value-addition in such activities as palm oil production, snail rearing, vegetable production, backyard poultry, soap making, beekeeping, and fish farming;
- Vocational and motivational counseling to youth for appropriate career selection, job placement, and self-employment; and
- Life skills and marketing training.

Increase access to micro-credit for 800 clients for business creation, expansion and performance.

- Formation of 60 business affinity groups for group lending;
- Training of 60 groups in credit access and management and basic book and record keeping; Provision of back-up technical training to recipient producer groups;
- Monitoring of loan recovery;
- Counseling and advisory services to groups; and
- Requesting a grant from USDA Food for Progress for a micro-credit fund.

In addition, the LEEP program will work with the Ghana Health Services to construct and rehabilitate health clinics, as well as assist with some provision of basic medicines and equipment to rural health posts. The program also would assist directly in the upgrading of the district health clinic by partnering with the Asutifi District Assembly and Asutifi District Health Directorate to develop the following:

- A complete plan of the assessed needs of the district with respect to a district health facility, including needs for infrastructure, equipment and human resources;
- Identification of available resources from all partners in this project, namely Asutifi District Health Directorate, Ministry of Health through the Brong Ahafo Regional Health Directorate, Asutifi District Assembly, NGGL, and any interested NGO partners; and
- A phased plan, which matches the available resources, outlining the needs for infrastructure, equipment and human resources that will progressively add beneficial service delivery to the district and at the same time provide revenue generation to the district health facility allowing sustainability to be developed.

The LEEP program will also increase access to potable water and sanitation facilities for 10,000 people through the establishment and training of four Water and Sanitation Committees in the resettlement villages, and formation and training of four borehole pump and sanitation facilities maintenance teams.

To improve children's access to education, the LEEP program will rehabilitate and upgrade within available resources existing nursery, primary, and secondary schools and libraries as well as construct new ones where necessary. The program will link up with an agency such as the International Foundation for Education and Self-Help and the Ghana Education Service for the provision of teachers, formation of parent teacher associations, and creation of a teacher's resource center.

The LEEP program will also replicate a modern version of the OICI vocational training center model adopting an approach called "Training for Employment and Enterprise Development" (TEED). As a component of the training the center will engage in income generating activities geared at providing practical hands on training to trainees as well as creating new and expanding existing enterprises in the area that could support the mining operations and other future business development in the area.

Minimizing Socio-cultural Impacts

A Project of this nature and magnitude, even with mitigations in place and others being recommended, will ultimately disrupt activities of local residents and irrevocably change the nature of the local area. Social systems and structures have evolved in the area over generations and have responded dynamically to the changing social environment. Development of this Project will involve significant social change, particularly as Project-affected residents are relocated/resettled, and residents will experience a change from living in an agricultural area to living in an industrial area.

At a broad scale, reducing socio-cultural impacts resulting from the Project will focus on the following main objectives.

- Objective 1: Minimizing the Number of People Affected by Involuntary Resettlement;
- Objective 2: Improving Livelihoods; and
- Objective 3: Involving the Affected Public in Decision-Making.

As discussed above a Livelihood Planning program has been established that will support those households actively diversifying their income base. Complimentary to livelihood improvement strategies are programs whose goals are to mitigate social and cultural impacts. These impacts are generally associated with disruptions to the customary fabric of family and community ties. Mitigation of these anticipated impacts are discussed below.

NGGL has included traditional authorities in planning throughout the development of the Project and will continue to value the skills and input of these chiefs and elders in the decision-making process. Traditional authorities have been key participants in building broad community support for the Project. Ten percent of the junior level jobs have been allocated to the discretion of the traditional authorities, called Protocol appointments.

Gold production at the site is predicted to be in excess of 6.8 million ounces during the 15 year life-of mine. At the national level, the Project will have a direct positive impact through payment of royalties and taxes related to gold production and NGGL profits. Indirect positive impact would result through income taxes on increased employment, personal income, profits of local businesses and major suppliers, and purchase of goods and services manufactured and supplied in Ghana.

With increased economic opportunities also come economic risks at the local level. Inflated housing and food prices may be a negative impact of Project development. Of particular concern is the impact that high housing rental prices are currently having on teachers and health workers that have been deployed to the area or enticed by the hope of jobs. As a mitigation measure, NGGL has provided transfer and moving allowance to teachers of Project-affected schools even though they may not have actually moved themselves but their school has moved. This program has assisted those teachers to better cope with the transition.

High living costs threaten to undermine the ability and desirability of staff to work in the area – and as a consequence, threaten access of local residents to health care and education. This is of particular concern during the current construction phase, especially before project accommodations have been built to relieve demand on the local housing market.

Development and upgrading of roads to service the Project has been undertaken by NGGL. However, increased vehicle traffic will likely increase risks to local residents' health and safety. NGGL will mitigate this hazard with strict codes of conduct for mine personnel operating heavy equipment and light vehicles to minimize traffic hazards. Information will be distributed to local residents highlighting health and safety risks in the Study Area.

Community Health Impacts

Malaria is the most frequently occurring disease in the Study area. Malaria is a complex problem as it requires significant institutional capacity (financial input) and education to undertake preventative programs. Various studies have been completed by malaria specialists from the South African Institute of Medical Research, as well as environmental economists from the NGO Africa Fights Malaria, to ascertain the impacts of malaria on heavy industry and mining in Mozambique and Zambia. All these studies conclude that the disease has an impact on productivity in the form of downtime, treatment costs, and the costs of preventing the spread of malaria (CIVA 2005).

NGGL is committed to reducing and controlling mosquito presence in and around the Study Area, potentially benefiting all Project affected people. NGGL has developed a prevention program to reduce exposure of individuals to malaria. The malaria prevention program is summarized below.

- The NGGL Director of Human Resources is responsible for development, implementation, and maintenance of the Malaria Procedure for Ghana and the guideline addendum;
- Managers of Environmental and Safety Departments are responsible for the safe use and application of anti-mosquito chemicals used in spraying and fogging activities;
- Contractors are responsible for implementation and management of mosquito control programs as outlined and directed by NGGL through purchase order or contract documents; and
- Employees must incorporate anti-malarial precautions seriously in order to protect themselves and their families from mosquito bites.

HIV/AIDS are seen as critical issues in Africa with disastrous long-term consequences. It is well known that the disease follows transport corridors and spreads rapidly in areas where there is an influx of migrant workers. In southern Africa, HIV/AIDS are placing considerable pressure on those caring for ill or disabled miners, typically family members. In households, the impacts are immense. Head of households are dying with little or no provision for their families – many of who are also likely to be or become infected. While this is not yet the case in Ghana, the risk should not be under-estimated.

In order to mitigate potential spread of HIV/AIDS NGGL has signed a Memorandum of Cooperation with the International Labor Organization under a US Department of Labor funded program. An HIV/AIDS Steering Committee has been formed which includes NGGL's Managing Director for West Africa, as its Executive Sponsor. The committee includes the Director of Human Services as the Focal Person, junior and senior Ghanaian staff employees from all of Newmont's Ghana operations, as well as representatives from the union and major contractors. Medical input is provided by a clinical doctor and a health consultant. The Human Resources Department surveyed 50 employees for baseline medical information, attitudes and beliefs and recently distributed a Behavioral Change Communication at the Ahafo South Project.

The workplace and community programs addressing HIV/AIDS are in compliance with Newmont's Social Responsibility Policy, and represent an ethical response to the threat of HIV/AIDS. NGGL is committed to fully implementing an HIV/AIDS policy with potential to educate and benefit Project affected and non-affected people in the area.

Cultural Resource Impacts

Potential impacts to cultural resources include loss of artifacts and historical/archaeological information from disturbance of two identified cultural heritage sites in the Project Area. No impact is anticipated to other cultural sites within the Study Area. Shrines can be moved by making a libation and paying the chief to intervene with the gods to allow the move. Even though not required, NGGL will notify the national museum of discovery of cultural artifacts or historical features, and will allow museum professionals an opportunity to evaluate any findings.

If they determine that collection of additional data is warranted prior to further disturbance of the site, NGGL likely will allow such data collection.

Newmont Standard S.021, Management of Heritage Sites, was adopted to ensure that each Newmont managed facility properly respect and adequately protect all sites with heritage significance or potential heritage significance within the Project's sphere or influence.

Evaluation of conformance with the Standard will occur during annual 5 Star Assessments regularly scheduled for all Newmont operations sites. Performance will be publicly reported during the first quarter of the following year. Management of Heritage Sites will be implemented according to Newmont 5 Star specifications taking into consideration the following:

- Protocols for land and building disturbance, objectives, targets and key responsibilities;
- Inventory of all sites and exclusion zones in accordance with the cultural norms of relevant stakeholders. Where cultural norms require confidentiality, there must be processes to ensure confidentiality;
- A list of contacts relevant to particular sites of significance. As above, this list must be kept in accordance with the cultural norms of relevant stakeholders; and
- Records of unauthorized disturbances, and corresponding investigations.

MONITORING AND EVALUATION – CONTINUOUS IMPROVEMENT

Since the start of development of the Ahafo South Project in early 2004, primary stakeholder community members have been affected by a multiplicity of events and activities, such as labor pool recruitment, relocation and resettlement, compensation for crops and buildings, ongoing mine construction and infrastructure development, community development interventions, and population influx. Performance data on specified sector domains are being collected. However, there is a need to improve on the data collection in those areas and to add data collection in other domains, all of which will continuously improve the monitoring and evaluation and ultimate effectiveness of project programs to improve the well being of Project-affected people and the broader community as well as the effectiveness and documentation of mitigation measures in place.

As part of this continuous improvement process, NGGL is undertaking expansion of the monitoring and evaluation component of the project to develop and operationalize a dedicated monitoring and evaluation unit at the Ahafo site. This program will be composed of both NGGL and OICI staff to ensure continued improvement on tracking and performance of activities and interventions, and evaluation of impacts with more efficient and detailed reporting and analysis.

The objectives of the development of the dedicated monitoring and evaluation unit are to create a program that will achieve the following:

- Coordinate all External Relations data into one accessible location;
- Provide an improved avenue for documenting and monitoring the status of all agreements reached, grievances reported, and implementation of all Newmont obligations and commitments;

- Establish a formalized early warning system that is able to identify and pin-point potential conflict situations before they develop;
- Improve the monitoring and evaluation of the impact of project activities on mine affected populations and key stake holders;
- Develop and monitor the implantation of coordinated responses to unanticipated/unexpected events and outcomes; and
- Directly meet and respond more efficiently to requests / requirements of key stakeholders and outside institutions both within Ghana and internationally to continuously improve engagement, collaboration and cooperation to maximize the benefit of the project to the area.

PROJECT DESIGN, OPERATION, CLOSURE, AND ENVIRONMENTAL ISSUES

ENVIRONMENTAL DATA

Data and Technical Report Availability

ESIA References

Information provided in the ESIA documentation has been summarized from numerous technical reports some of which are not included in the appendices of the ESIA documentation. Technical documentation has been reviewed by independent third-party engineers as part of the normal loan review process. The documents which are critically important to the ESIA (i.e., raw data) have been included in the appendices of the documentation.

Results of kinetic testing were disclosed upon request. Some analytical data and report preparation are still pending to complete the Phase II testing program. NGGL is committed to completing on-site weathering column studies and humidity cell testing on the same materials in a Phase III testing program which will be used to verify Phase I testing. Phase III testing will also include standard humidity cell test following ASTM protocols.

Data Quality and Adequacy

Forest Reserves

NGGL was provided data regarding Forest Reserves from the representatives of the Ghana Forestry Commission. These data were used in the ESIA in the form and detail provided to NGGL by the Forestry Commission.

Ongoing Studies

Environmental Geochemistry – Rock Characterization – Water Resources – Pit Lake Modeling

NGGL recognizes that additional rock characterization studies and groundwater and surface water studies are being completed at this time. In recognition of the potential for these studies to result in a need to modify the design, operation, or closure plans for the Ahafo South Project,

NGGL has included a range of project alternatives that would be implemented as necessary to address test results. These alternatives are outlined in Chapter 3 of the ESIA. See also responses to comments regarding potential for acid mine drainage (AMD) below.

NGGL has indicated measures that could be implemented including modifying the soil replacement depth (to ensure rooting depth of vegetation is sufficient to avoid waste rock material that could affect sustainable vegetation cover), capping of the disposal facility to reduce or limit infiltration, and/or operation of the leachate collection and treatment facility for solutions that may migrate through the pile should kinetic testing of waste rock indicate the need for a modification to the design and management of the waste rock disposal facility.

NGGL has prepared a final draft Reclamation and Closure Plan which forms the basis of the reclamation details presented in the ESIA documentation. The Reclamation and Closure Plan must be reviewed and approved by the Ghanaian EPA prior to becoming a public document as a requirement to fulfill requirements of the mining lease. The Ghanaian EPA is currently finalizing revised Reclamation and Closure regulatory modifications which will form the basis from which to submit the plan. NGGL will submit the current detailed plan upon finalization of the regulation review.

Results from current studies regarding rock characterization, humidity cell tests, and groundwater/pit lake modeling will be used in development of an appropriate closure plan addressing potential for acid-mine drainage, long-term water management, and residual cyanide management.

Acid Mine Drainage (AMD) and Potentially Acid Generating (PAG) Rock

The ASTM standard test methods for acid rock drainage (ARD) prediction (E-1915) are based on the methods used by Newmont and many other mines in Nevada. Newmont has demonstrated the ability to properly use these methods to predict ARD (also known as acid mine drainage – AMD) at its operations including the Rain mine in Nevada referenced in USEPA ARD guidelines. Kinetic tests were conducted on slightly basic, inert, neutral, and slightly acidic materials. Only the slightly acidic material was confirmed to be acid generating at Ahafo and these results were confirmed using the Bacteria Acid Producing Potential testwork (BAPP).

Newmont methods were provided to the IFC during the comment period for guideline development. Newmont has used standardized test methods including ASTM E-1915 in its characterization program and BC Research Confirmation testing to confirm acid generation reactions and the net acid generation method to correct for false positive BAPP results that do not contain reactive pyrite.

Kinetic testing of the samples from the Ahafo South Project site indicated that only one sample is confirmed as producing ARD (AMD). Using a classification system that estimates neutralization potential due to both carbonates and silicates may overestimate the neutralization potential from calcium and magnesium carbonates that prevent acid generation. This is the reason Newmont uses carbonate to estimate acid neutralization potential. Use of total sulfur may overestimate acid generation potential, since it includes sulfates resulting in a large uncertain classification. All of the samples were classified in the system used by Newmont, not just some of them as practiced by the ABA method. It is the uncertainty in the ABA method, not Newmont's methods, that result in the relatively large proportion (~40 percent of samples) being identified as possibly acid generating.

Samples of the mine waste rock will be monitored during active mining of the deposit using NCV methods. Site weathering columns will be constructed and monitored on-site and results will be used to manage the design and placement of waste rock in the waste rock disposal facilities.

Potentially Acid-Producing (PAG) Rock

Potentially-acid generating (PAG) rock would be excavated from the mine site and some of this material could be placed as waste rock in the proposed waste rock disposal facility. As described in Chapter 2 – *Waste Rock Disposal Facilities*, PAG rock would be encapsulated within non-PAG rock to ensure acid-neutralizing rock would surround the PAG material.

NGGL is committed to implementing the necessary measures (isolation, encapsulation, and/or lining) to ensure PAG rock excavated during development of the Ahafo South Project will be managed in a manner that is protective of the environment. Kinetic study results will be used to determine if rock management measures beyond those described in the EISA will be necessary to ensure PAG rock is properly managed.

MATERIAL MANAGEMENT PROGRAMS

Hazardous Waste Management

NGGL is committed to compliance with requirements outlined in the proposed Hazardous Waste Bill pending in the Ghanaian cabinet. NGGL has not sought “grandfather exclusion” from any current or future Ghanaian requirements applicable to NGGL’s activities in Ghana and new and revised regulatory requirements will be implemented in their entirety following legislative approval.

NGGL will test all wastes prior to incineration or will review existing data to determine whether proposed incineration is the appropriate treatment of wastes. Should test results of specific materials scheduled for incineration indicate that incineration is not the proper treatment, NGGL will evaluate alternative treatment methods including autoclave and/or microwave systems. NGGL will also evaluate scrubber systems to reduce or eliminate problem emissions.

Cyanide Management

Cyanide management, as outlined in the ESIA, will be conducted in accordance with the International Cyanide Management Code. The concentration of cyanide in process solutions reporting to access-controlled ponds within the mine area will be maintained at levels commensurate with that code. In addition, NGGL will monitor the ponds to ensure that cyanide concentrations are not creating environmental issues and will treat solutions to reduce concentrations necessary to address these issues.

The supernatant pond located at the tailing storage facility is a component of the mill circuit. Process solutions that report to the supernatant pond are recycled to the mill circuit. Residual cyanide concentrations in this process solution would be augmented with additional cyanide in the mill circuit to bring the process solution to optimum levels for ore processing. Maintenance of the cyanide concentrations at levels commensurate with the International Cyanide

Management Code (not to exceed 50 mg/L) reduces the amount of cyanide needed to be shipped to the mine/mill site to meet mill process solution requirements.

A “cyanide kill” circuit would be available at the site through use of a hydrogen-peroxide mobile emergency cyanide destruction facility (p. 2-29).

Process solutions located in interstitial spaces in the tailing material would, over time, migrate into the finger-drain collection system constructed in the tailing storage facility. Process solutions would be collected via this drain system and would be returned to the supernatant pond system. The finger-drain system and foundation preparation for the tailing storage facility are designed to intercept and collect process solutions without allowing discharge to the aquifer.

NGGL is committed to maintaining cyanide concentrations in the supernatant pond and tailing storage facility at levels that are protective of wildlife and the environment. As stated under *Cyanide Management and Treatment Program* on page 2-26, a cyanide concentration of 50 mg/L WAD cyanide or lower in solution is typically viewed as being protective of most wildlife and livestock. This level of cyanide concentration is commensurate with levels outlined in the International Cyanide Management Code. In addition, NGGL will undertake a risk assessment to ascertain cyanide mortality on wildlife and livestock. This assessment will be completed prior to commissioning ore processing operations. Should the risk assessment result in identifying cyanide concentrations as being problematic for the waterfowl or other animals that could gain access to the pond, NGGL will conduct appropriate treatment of the process solutions to achieve cyanide concentrations that are protective.

MINE FACILITIES

Waste Rock Disposal Facility

Seepage Collection System

Preparation of the foundation of the proposed waste rock disposal facility will require blending and mixing of available material to meet the design criteria of a permeability of 1×10^{-6} cm/sec. Achieving this design criteria will also require monitoring and compaction tests during construction to ensure the performance criteria is met. NGGL is committed to controlling infiltration that may migrate through the waste rock disposal facility through the design, maintenance, and closure of this facility.

Run-on Control Ditch System

Run-on control ditch systems are incorporated into the design of the waste rock disposal facility (see p. 2-10 of Chapter 2 for a description). This ditch system is designed to divert water around and away from the facility to ensure clean water run-on is not coming into contact with any mine facilities.

Reclamation

Soil salvage and stockpile is being directed by qualified environmental engineers monitoring field activities. Salvage of topsoil resources is critically important to NGGL's reclamation

commitment and NGGL fully intends to recover, manage, and use those soil materials which will facilitate long-term stability of post-mining vegetative communities.

NGGL has not identified any specific need to install a capillary break or water balance cap to control infiltration into the waste rock disposal facility. Should the results of additional rock characterization studies indicate a need to control infiltration through a specific cap system, NGGL will design and install a cap to limit or control infiltration.

NGGL acknowledges the performance limitations of random wheel compaction techniques for placement of a clay liner. Use of such techniques will require increased monitoring and testing to ensure design criteria are met.

Waste Rock Management

NGGL will implement Newmont's Environmental Standard NEM – ENV – S.042 (Jan 2005) which specifies Waste Rock Management standards for Newmont's operations. In general, the standard specifies the following **primary measures** be implemented at all waste rock disposal areas:

Primary waste rock disposal facility **design, construction and monitoring requirements include:**

- Environmental baseline conditions must be determined prior to siting and design of the facility;
- A balance of PAG vs. non-PAG rock must be developed to be used in design of the facility (isolation/encapsulation design);
- Acid rock drainage (ARD) potential will be determined using reliable acid-base accounting methodology;
- Design of facility must minimize generation of acid;
- Potentially acid generating (PAG) waste and PAG ore that is stockpiled must be managed to prevent the release of pollutants to the environment, including surface runoff, toe seepage, and infiltration into groundwater;
- Waste rock disposal facilities must be designed, constructed, and closed and reclaimed to be geotechnically stable. A minimum factor of safety of 1.3 static and 1.0 pseudo-static condition are required. Waste rock disposal facility designs must be reviewed by a qualified engineer;
- Runoff containment basins will be sized to accommodate the 25-year, 24-hour storm event;
- Facility design will accommodate concurrent reclamation, disturbed areas must be recontoured to final landform and revegetated, and runoff and erosion controls will be included in the facility design to minimize potential for low quality seepage, erosion, sedimentation, and instability;

- Permanent diversions around a facility will be sized to convey flow from the 100-year, 24-hour storm event as a minimum; and
- Groundwater monitoring wells will be established to monitor for seepage.

Waste rock and ore will be tracked such that material is routed to the appropriate disposal facility.

Disposal of solid or hazardous waste in the waste rock facility will be based on a defensible study that demonstrates waste is compatible with waste rock and complies with laws, permits, and will not compromise closure and reclamation.

- Ongoing periodic waste rock characterization including kinetic tests to confirm static test results will be implemented;
- Geotechnical monitoring of facility will be completed on a routine basis to ensure facility is being constructed in accordance with design criteria. Quarterly inspections will be implemented;
- Facility will be inspected following periods of heavy precipitation; and
- Groundwater wells will be monitored on a routine basis.

Tailings Storage Facility

Design and Safety

Stability of both the proposed Tailing Storage Facility and Water Storage Dam has been assessed in accordance with the International Commission on Large Dams recommendations relating to dam design and seismicity. Both the Operating Basis Earthquake, a horizontal ground acceleration of 0.1g, and Maximum Design Earthquake, a horizontal ground acceleration of 0.2g, have been used as part of the assessment and are considered conservative for this very low to low seismic activity area. Seismic parameters were selected following a review of published information relating to the Project area, during which it was noted that since 1973, only 14 earthquakes within 500 km of site have been measured with the closest being 163 km from the site.

Upstream construction methods will be used only for embankments beyond the maximum 1:100 year supernatant pond extent and providing that the tailings have achieved sufficient strength and consolidation. The design allows for the possibility of alternate construction methods should the upstream method not be feasible, such as downstream and/or centerline techniques. This will be evaluated by in situ testing of the tailings to review the stability during operations.

With regard to the Tailing Storage Facility and Water Storage Dam, the Tailing Storage Facility supernatant pond will be always at least 1 km away from the Water Storage Dam during operation and after one year of operation the tailings level will be above the Water Storage Dam embankment. The tailing will therefore act as a downstream buttress for the embankment making downstream slip failures of the very embankment unlikely. At mine closure, the Tailing Storage Facility surface will slope downwards towards the south embankment so that all water will free drain from the facility and hence, there will be no ongoing supernatant pond.

Liner System Design

Site foundation preparation using the natural saprolite material, mixing and blending to form a uniform material, and placing with compaction will result in a clay liner that will meet project design specifications. The Leachate Collection and Recovery System is designed to intercept and collect draindown from tailing placed in the tailing storage facility. Process solutions that report to the Leachate Collection and Recovery System are returned to the supernatant pond and ultimately, to the mill circuit. This drain system will remain in place until draindown of the tailing facility (free interstitial solutions are recovered) is complete. Residual moisture left in interstitial spaces in the tailing material after completion of draindown is held at specific retention. Solutions held in specific retention will not flow unless the tailing material becomes saturated. Reclamation of the tailing storage facility includes capping with growth media to both stabilize the tailing and control infiltration of water through evapotranspiration.

The tailing storage facility liner is 1.5 mm (60 mil) HDPE, supplied by GSE and installed by Aquatan, a GSE-certified installer.

The Basin Liner system will consist of construction of a 300 mm thick compacted low permeability basin liner above the prepared subgrade and below the HDPE geomembrane as part of the composite liner system (QA Manual for Water Dam And Tailing Storage Facility, Ahafo Project, Knight Piesold Pty Limited, September 2004 – KPPL 2004). Basin liner material will consist of clayey sand, clayey sand and gravel, clay, silty clay, or clayey silt that conform to Zone A gradation limits. The compacted basin liner will be constructed to achieve average in-situ permeability no greater than 1×10^{-8} m/sec as measured by both in-situ field methods and laboratory permeability testing methods. All QA/QC records generated during the installation of the basin liner system will be reviewed and audited independently to support compliance with the International Cyanide Management Code, of which, Newmont is a signatory.

Basin liner surface must be prepared for placement of the geomembrane including trimming and dressing to form a firm, dry, and smooth surface free of sharp projections that could puncture or damage the membrane. Filter sand will be comprised of processed sand and gravel from the borrow areas (KPPL 2004). All specifications for materials (construction, geomembrane, sand filters, piping, and filter fabric) and construction methods for placement of materials will be conducted in accordance with the QA Manual (KPPL 2004).

Tailing Dam Construction

The ESIA provides a summary description of the tailing storage facility dam construction method to be employed. NGGL commissioned Knight Piesold Pty Ltd (KPPL 2003) to complete a feasibility report including the design considerations for the tailing storage facility. The dam design for the Ahafo South Project tailing storage facility would be constructed as a starter embankment with initial construction and expansions to the dam using downstream construction technique due to the rate of rise of tailing against the embankment and the volume of material available from the open pit. Initially deposited tailing are expected to have low strength and consequently, embankment construction on the tailing using centerline or modified centerline methods is not considered viable for initial stages (KPPL 2003). Based on testing, the strength of the tailing would be sufficient to allow upstream construction of the embankments in subsequent years. Field sampling and testing would be used to confirm this assumption prior to initiating the upstream method. The downstream slope of the downstream embankment would eventually be buttressed by placement of a mine waste rock disposal facility (KPPL 2003).

Design Capacity – Storm Events

The Tailing Storage Facility has been designed to completely contain all storm events of return period up to 1 in 100 years when the Tailing Storage Facility is completely full during each stage of development with a minimum of 1 meter of freeboard. During portions of the year when there is additional capacity, the facility will hold larger than a 1 in 100 year event. In the event that a storm exceeding the design event occurs, discharge from the facility will be controlled via an engineered spillway.

The emergency spillway is designed to handle storm events of Average Recurrence Interval (ARI) 1 in 1,000 years. With each stage raise of the Tailing Storage Facility a new spillway will be constructed. The spillway constructed at closure of the Tailing Storage Facility will be designed to control the discharge resulting from Probable Maximum Precipitation (PMP) storm event.

Tailing Characteristics - Consolidation

Permeability of the tailing to be generated during processing of ore for the Ahafo South Project was evaluated by Knight Piesold (KPPL 2003). The results of those tests are included in the following table:

Ore Type	Test Type	Dry Density (t/m ³)	Permeability (m/s)
Primary	Falling Head	1.35	4.0 × 10 ⁻⁷
	Permeability	1.39	3.3 × 10 ⁻⁷
	Consolidation Test	1.22	6.4 × 10 ⁻⁶
		1.24	1.1 × 10 ⁻⁶
Oxide	Falling Head	1.27	3.3 × 10 ⁻⁷
		0.96	4.8 × 10 ⁻⁸
	Permeability	1.00	4.9 × 10 ⁻⁸
		0.80	3.1 × 10 ⁻⁸
	Consolidation Test	0.82	3.6 × 10 ⁻⁷
		0.92	7.2 × 10 ⁻⁸
0.95		4.9 × 10 ⁻⁸	

These results show an upper limit of permeability prior to additional consolidation as a result of tailing loading and drying (KPPL 2003). Further testing completed on tailing material to characterize the physical behavior indicates that release of water from the primary tailing (at 48% solids) would be 54% of the initial volume as supernatant in undrained sedimentation test and 47% in the drained test. The rate of supernatant release was complete within one day. Oxide tailing (at 39% solids) released 40% in the undrained test and 33% in the drained test. Rate of supernatant release was slower requiring about 6 – 7 days to complete with 30% of the initial volume being released in the first day (KPPL 2003).

Water Storage Facility

Emergency Spillway and Diversion Structures

Diversion structures constructed in the Awonsu tributary of the Tano River will be designed to pass a storm event of similar size as the spillway capacity for the storage reservoir. Sediment control systems will be installed on the Awonsu tributary to ensure sediment would be captured.

Location

The location of the Water Storage Reservoir was chosen, in part, to minimize the footprint of the Mine Take Area and the number of watersheds that could be affected by the Project. Sound engineering design and construction practices have been implemented in development of the Water Storage Reservoir and Tailing Storage Facility. The design has been independently reviewed by a third-party engineering consulting firm in accord with IFC requirements.

Seepage Drain System

The Tailing Storage Facility has been designed with a continuous seepage containment system such that there are no perforations in the HDPE liner, clay liner or embankments. Using this premise and given that the Water Storage Dam embankment both retains water (upstream) and tailings (downstream) it was necessary to discharge any seepage through the Water Storage Dam embankment via the chimney drain and finger drains into the tailing underdrain system, part of the seepage containment system. As such, any seepage from the Water Storage Dam embankment chimney drain or finger drains will enter the Tailing Storage Facility containment system and will be pumped from the system until the Tailing Storage Facility is finally reclaimed and decommissioned. Thereafter, any seepage will be discharged over time, similar to percolating rainfall through the tailing mass. Note that any seepage from the Water Storage Dam which flows beneath the embankment will be collected by the leachate collection and recovery system (LCRS). This system is independent of the Tailing Storage Facility containment system (i.e. it runs beneath the clay/HDPE liners) and this system also terminates within the confines of the Tailing Storage Facility due to the potential for this system to handle seepage water from the tailing mass. Seepage rates from the Water Storage Dam are expected to be very small compared to that expected from the tailing mass at mine closure (less than 2%). Following mine closure, a phreatic surface will develop within the Tailing Storage Facility, which will be controlled by the amount of remnant water within the tailing mass, seepage from the Water Storage Dam, permeability of the base and embankment, and vegetation cover (evapotranspiration).

While it is technically possible to direct the Water Storage Dam seepage into the LCRS, this would involve perforating the clay liner. The benefit of this would be that all the clean water will have the potential to seep from the Tailing Storage Facility faster as the LCRS system is located underneath the liner where higher permeability materials are present. Given the relatively small volume expected, this would have a negligible effect on the long term performance of the Tailing Storage Facility. However, the perforations through the compacted soil liner would be considered a point of weakness in the containment system as there is potential for leakage at the junction between the soil and pipe at the perforation.

Mine Pits

Mine Pit Hydrogeology

NGGL is completing hydrogeological studies to both determine mine pit inflow conditions that would affect the operation of the Ahafo South development as well as the potential quality of water that would reside in each mine pit upon closure of the site. Should predicted conditions indicate the need for pit lake management including treatment of water, NGGL will develop the appropriate financial mechanism to ensure future water management will be addressed. Chapter

3 – *Alternatives* in the ESIA identifies various measures NGGL could implement to manage poor quality pit lake water at cessation of operations.

Pit Lake Modeling

As results of the kinetic testing become available, NGGL will complete pit lake modeling to predict characteristics of groundwater inflow and quality at cessation of mining operations. Such modeling will be used to review adequacy of the current reclamation and closure plan for the Ahafo South Project. Should modeling indicate that NGGL modify the current closure plan, NGGL will review the model results with the Ghanaian EPA and IFC to determine the need to revise closure plans.

Environmental Control Dams

Location and Operation

As described in the *Waste Rock Disposal Facility* section above, runoff from the face of the waste rock pile would be captured by a toe berm and would report to the seepage collection pond. Runoff from the waste rock pile would not report to Environmental Control Dams.

Given the topography of the mill site, the selection of the location for the sediment control dam (aka – Environmental Control Dam) was chosen to not only capture sediment contribution from the mill site and yard/parking area but to also capture sediment from the Plant Bypass Road.

The key to sediment control is maintenance of the capacity of the basins such that the basins can continue to perform to design standards.

As described in the ESIA, sediment generation during the construction phase of the project when large areas such as the tailing storage facility are under construction, will be difficult to control and water quality downstream of such activities, no matter what controls are in place, would not meet normal water quality discharge standards. These impacts are short-term and reversible once best management practices (BMPs) are installed such as silt fencing, brush barriers, temporary sediment ponds, and rapid revegetation. BMPs are accepted industry practices to minimize mobilization of sediment into the local water ways. In addition to BMPs, permanent sediment control structures (ECDs) were installed early in the construction process at Ahafo to provide additional sediment management control. NGGL has implemented all measures possible to minimize sediment impacts during construction. However, in recognition of the potential short-term impacts to down stream water users of the affected streams, alternative sources of water were provided. In areas where revegetation has successfully matured, the vegetation in combination with BMPs and ECDs has resulted in acceptable discharge water quality.

RECLAMATION

Reclamation Performance

Visual documentation of a typical reclaimed drill site is provided in the Guide to Land Acquisition and Compensation (GLAC) document posted on the IFC website. No specific reclamation report has been compiled to date regarding NGGL's reclamation activities in the Project area.

Reclamation Plan

The Reclamation Plan presented in the ESIA summarizes the plan contained in the Ahafo South Project EIS on file with the Ghanaian EPA. This plan addresses requirements of the Ghanaian EPA as well as NGGL policies and IFC requirements for closure of mine sites. Ghanaian EPA also requires that a final closure and reclamation plan be compiled and submitted within 18 months of issuance of the mining lease. NGGL is currently preparing this final plan.

The IFC has drafted guidelines for Precious Metal Mining under their Environmental Health and Safety program. These guidelines are currently presented for public review and comment. Once these guidelines are finalized and adopted by IFC, NGGL will review the current mine and reclamation plan for the Ahafo South Project to determine if any revisions are necessary to meet the new guidelines

Post-Mining Land Use

Ghanaian regulations indicate that reclaimed lands must be returned to the Ghanaian Central Government for final disposition. Reclamation of the Project site includes an option to reclaim portions of the site to post-mining land uses including subsistence farming; however, NGGL cannot ensure that reclaimed mine land would be used for this purpose because ownership of the “take area” will revert to the Ghanaian central government. Land uses that the central government may decide for the reclaimed mine area are unknown at this time.

Soil Salvage

NGGL recognizes the merit of segregating topsoil from subsoil during salvage and redistribution. Such practice would be employed where practical during soil salvage and stockpile operations. To better define the soil resource in the Project area and to maximize recovery of this valuable resource, NGGL Environmental Department staff, together with the Mine Engineering staff are closely monitoring the topsoil salvage operation during stripping activities. Topsoil stockpiles are surveyed for location and volume and labeled with the date and area from which it was salvaged. Stockpile locations are then mapped, and the locations stored in a GIS database. Finally, topsoil stockpiles are revegetated to minimize loss of soil material due to erosion.

Soil Stockpiles

NGGL will seed soil stockpiles to reduce soil losses during the life of the stockpile.

Reclamation Costs and Bonding

Newmont Ghana Gold Ltd (NGGL), having been granted a mining lease by the Government of the Republic of Ghana for the Ahafo Project, is obligated by law to provide security to the Ghanaian Environmental Protection Agency (EPA) for the performance of its obligations for reclamation of mining lease land that has been disturbed by NGGL. The initial security bond will be an aggregate of a cash deposit and a bank guarantee equal to a cost estimate agreed upon between NGGL and the EPA. A corporate guarantee is not acceptable. The proportions of the cash payment and the bank guarantee of the security bond are also subject to agreement between the EPA and NGGL. NGGL is fully committed to comply with the laws of the Republic of Ghana and to adequately bond for closure and reclamation liability during all stages of the project.

The security bond is required to be negotiated within six months of the start of operations. The Ghana EPA has indicated that they consider the start of operations to be the “official start of mining activities”. NGGL submitted official notice to the Minerals Commission and the EPA that mining commenced on 9 January 2006. During the next six months, NGGL and the EPA will work together to verify the cost estimate and determine the proportion of cash deposit versus bank guarantee. The first discussion with the EPA is scheduled for the 19th of January 2006.

NGGL has already developed a closure and reclamation (C&R) plan and cost estimate for while preparing the Ahafo Project feasibility study. Additionally, NGGL prepared a conceptual C&R plan and cost estimate for the EPA when updating the Ahafo South EIS in 2004. The cost estimates were based on information known at the time, assumptions defining specific reclamation activities, Ghana EPA reclamation success criteria, and unit rates for performing the work. These closure and reclamation plans were consolidated and updated by MFG, Inc. in 2005 in preparation for the Ahafo ESIA.

Reclamation planning is an iterative process taking into account either physical or geochemical changes which may be identified over the life of the facility. NGGL will update the C&R plan with new information such as updated mine and waste dump plans and updated geochemistry characterization data. NGGL will also reevaluate the assumptions and unit rates to ensure that they are valid for current mining and economic conditions. NGGL will provide this updated information to the EPA during the negotiation process. NGGL anticipates finalizing the bonding agreement based upon both fixed cost and variable cost liability. A fixed cost liability exists for closure and reclamation of fixed facilities such as the plant site and administration facilities, dewatering and capping the tailing storage facility, water treatment, environmental control dams, etc. The liability for closure of the fixed facilities occurs early in the project and basically remains for the life of mine. Variable cost liabilities primarily relate to mine pit and waste rock dump development and will change over time as pits and dumps are opened or expanded and as concurrent reclamation activities “close” areas that are reclaimed and will no longer be disturbed. Periodic reviews of the C&R liability for the Ahafo Project will occur with the EPA at an agreed upon frequency to ensure that security bonding is accurate and up to date in relation to actual conditions and the liability associated with both current and planned activities.

Royalty Payments

A prescribed percentage of the royalty payments made to the Ghanaian central government are returned to the region and district from which the royalty was generated in accordance with the laws of the Republic of Ghana. Local government agencies can, at their discretion, use the money to fund infrastructure and programs to support project-affected communities and individuals. NGGL is working with local government, NGOs and local communities to develop an overall development plan which will define responsibilities for each of the participants to aid in the overall sustainable development of the Project area.

MONITORING

Monitoring Reports

NGGL will compile and submit monitoring reports for all resources for which monitoring will be conducted at the Project site. Distribution of these modeling reports will be done in accordance with Ghanaian EPA and IFC protocols.

Monitoring Station Locations

Surface water monitoring stations have been located on all drainages potentially affected by mine development at Ahafo South. The drainage east of the Subika Pit waste rock disposal facility would not be affected by the facility because it is across the divide from the facility.

Monitoring Programs

NGGL's monitoring plan includes monitoring waste rock, mine pit inflow, and water resources during and after mining operations. Baseline information for water quality will be used to compare water quality during the life of mine.

The intent of locating a surface water monitoring station at the furthest downstream location was to site the station below the confluence of the Mama and Pra rivers. These rivers are the primary drainages for the Project site.

Water monitoring will occur in the leachate collection system associated with the waste rock disposal facility. Effluent from the waste rock facility will be collected in this system and not discharged to the natural ephemeral drainages located in the waste rock disposal area.

ENVIROMENTAL BASELINE INFORMATION

Water Quality

Water Quality Data

The ESIA presented water quality standards from various government entities and global standards as a means of presenting a comparison of the various standards (i.e., Table 4-36, Ahafo South Project ESIA). NGGL has committed to meet water quality standards which are protective of human health and the environment. In many cases, determination of the appropriate standard will be based on beneficial uses and the appropriate evaluate of risks.

The ESIA presented a summary of baseline surface water quality conditions (Table 4-37) throughout the project area. Monitoring station specific water quality data is presented in Appendix C of the ESIA.

Water Quantity

Water Balance

Water balance modeling (KP 2003) resulted in the following conclusions regarding water needs and uses associated with the Project:

- Under average conditions and with water harvesting during the pre-start up period, up to 9.6 Mm³ will be deposited in the water dam. This volume of water is sufficient to supply the operation for average climatic conditions and for 1 in 100 year recurrence interval 2 year duration dry sequence without any additional water harvesting during operations;

- Modeling of design wet year rainfall years and storm events indicate the TSF has more than adequate capacity for storage of the design events throughout the entire life; and
- The potential maximum water volume at the end of the life of the operation required to be treated is 3.9 Mm³. The minimum volume for treatment will be about 1.1 Mm³.

As indicated in the ESIA, some need for additional startup water is warranted and will be harvested from the Tano River during the period prior to start up. Water withdrawal from the Tano River is scheduled to occur only during runoff periods associated with the rainy season of the year. Pumping rates from the Tano River would not exceed 18 percent of river flow during dryer than normal wet season conditions, and as low as 2% of the flow during normal rainy season high flow conditions.

Given the short-term pumping of water to fill the reservoir during the pre-operational phase and the commitment to withdrawal of water only during the rainy season, no long-term effect would occur to groundwater and surface water uses in the Project area.

Wetlands

Although wetlands are identified as an important resource in Ghana, no official definition of what constitutes a wetland has been developed by the Ghanaian EPA. Unlike the United States, where the Corps of Engineers and EPA have precisely defined wetlands based on three parameters (vegetation, hydrology, and soil), Ghana has not developed the criteria to determine if a site is a wetland; therefore, the determination of what constitutes a wetland is subjective and variable. Considerable research and field sampling has been done to develop criteria for hydrophytic vegetation, hydric soil, and hydrology in the U.S; however, much of this work is not transferable to Ghana because of ecological differences associated with precipitation amounts and distribution, temperatures, and vegetation in equatorial Africa. For example, no information is available in Ghana concerning the relative fidelity of plants to wetlands (e.g., obligate, facultative, or facultative wet).

Similarly, assessments to evaluate wetland functions and values have not been developed for wetlands in Ghana. Unlike the United States which has more than 60 methods of functional assessment being used by states, agencies, and private groups, Ghana does not have any recognized methods to assess wetland functions and values. To develop such a methodology would require considerable data collection to characterize wetland functions over the course of several seasons (wet and dry), as well as determining what values the local populations place on wetlands.

In the past there have been no standards in Ghana concerning assessment of wetland functions and values; however, NGGL has recognized a need to develop a methodology that would allow functional characteristics and societal values of wetlands to be evaluated and NGGL is developing study plans that will investigate wetland functions and values for future Projects.

Biodiversity

NGGL has initiated a Biodiversity Management Program in conjunction with Conservation International (CI). This program includes development of a full understanding of biodiversity conditions in and around the Ahafo South Project area to determine management opportunities related to current and foreseeable actions which may impact biodiversity. To date, detailed flora

and fauna characteristics have been established for all areas within the established Mine Take Area. NGGL has developed plans to extend studies to local Forest Reserve area which are located outside of any proposed mine area.

NGGL, CI and local communities will collaborate to develop meaningful biodiversity indicators, develop landscape scale conservation planning and priorities, identify opportunities to make targeted outcome driven conservation investments, and promote biodiversity conservation concepts within the mining community.

NGGL has implemented programs to educate employees about NGGL's prohibition of employees and contractors from engaging in hunting on all mine properties and adjacent Forest Reserves.

ENVIRONMENTAL AND HUMAN HEALTH STANDARDS

NGGL has not indicated that lesser human health and environmental standards will be implemented at the Ahafo South Project. On the contrary, NGGL is seeking through application to the IFC to design and operate this project within World Bank/IFC human health and environmental standards as well as Newmont's Social Responsibility Policy.

NGGL is committed to implementing standards of practice for protection of human health and the environment in accordance with Ghanaian requirements, IFC/World Bank standards, and Newmont's own policies. NGGL is cognizant of activities of the Ghanaian cabinet in developing a law to address hazardous wastes. NGGL will comply with any and all requirements of this legislation. Until such specific enactments become law, NGGL is committed to the management of hazardous materials in accordance with national and international guidelines and policies as they pertain to use of incineration or land disposal as a viable method for management of these materials.