
5.0 HEALTH AND SAFETY PERFORMANCE IN THE YEAR 2015

5.1 Safety Programmes Undertaken In 2015

Two (2) main programmes, i.e. Planned Task Observation (PTO) and Standard Operating Procedures (SOP) were fully rolled out in the year. The programmes were aimed at equipping employees with their work procedures and the standard tools/equipment required to work. These were embraced by heads of departments and with the help of all the supervisors and the entire workforce, the programmes became a success. About ninety-eight percent (98%) of the departments had hundred percent (100%) PTO tracking; while eighty-five percent (85%) had their SOPs developed with about forty-five percent (45%) of employees trained on their respective SOPs. The percentages were arrived at from the competency training index templates designed for the departments.

The quarterly safety committee meetings were successfully organized. Schedules were made for the outcome to be made known to the entire workforce by way of departmental quarterly meetings where the meeting materials were projected at selected venues of the mine. This gave room for employees to see for themselves the safety performance for each quarter and their contributions to improve on the performance quarter by quarter. Employees who contributed to improved safety in their work places over the quarters were rewarded by the OHS Department.

5.1.1 Inter-Mines Safety and First Aid Competition

An inter departmental competition was held for the first time to select a formidable team to represent the company. Heads of departments brought representatives from their respective departments to partake in the training and selection for the competition. The year's zone three Safety and First Aid Competition was hosted by Adamus Resources Limited at Nkroful. Out of the four competing teams, GMC mine placed fourth with our community team emerging as winners. The National competition was hosted by Goldfields Ghana – Damang Mine. The GMC community team won in their category. Total cost for 2015 National First Aid Competition was \$10,691.81 . See Plates 27 and 28, a cross-section of delegates in attendance and GMC team ready to take their scenario respectively.



Plate 27: Shows a cross-section of delegates in attendance



Plate 28: Shows GMC team ready to take their scenario

Management held a dinner in honour of the community team for winning the National Competition. The General Operations Manager (GOM) led a team of managers to grace the dinner. Optional pieces of advice given were all geared towards the fact that they shouldn't be swollen headed but rather work harder so that the victory would continue year to year progressively. The mine team was also encouraged to emulate same victory come next year (2016) . See Plates 29 and 30 showing GMC community First Aid Team performing their scenario and GOM presenting National Certificate to the GMC community team respectively.



Plate 29: Shows GMC community First Aid Team performing their scenario



Plate 30: Shows GOM presenting National Certificate to the GMC community team

5.2 Training

As part of our training programmes, a day was added to our induction days making a total of three (3) days, thus, Tuesdays, Wednesdays, and Thursdays. On the third day, trainers from the departments with representation in the first two days took their members through their SOP's and other related training materials. Table 7 below shows the training days and the type of training conducted.

Table 7: Shows the training conducted

DAYS	TYPE OF TRAINING
Tuesday	• Wellbeing
	• Company Policies
Wednesday	• OHS Induction
	• Environmental Induction
	• Short Test
Thursday	• Departmental Specific Training

A total of One Thousand, Eight hundred and Fifty Six (1,856) employees, contractors and visitors were taken through our induction and training modules in 2015. Two Hundred and Forty Three (243) employees went through the departmental specific training.

5.3 Incidents

Thirty (30) incidents occurred. Twenty Three (23) were damages and seven injuries. The injury breakdown is as follows:

• Lost Time Injuries (LTI)	2
• Medical Treated Injuries (MTI)	3
• Minor Injuries (MI)	2
• Lost Time Injury Frequency Rate (LTIFR)	0.40
• Total Working Hours Without Injuries	1,426,814

The injury trend indicated hand/fingers – 3 injuries, and head/eyes – 3 injuries. This gave a fair idea of the areas to intensify Personal Protective Equipment (PPEs) use enforcement.

5.4 Fire

Fire awareness programmes including fire drills were jointly organized by GMC and the Tarkwa Nsuaem Municipal Ghana National Fire Service on site and at the Tarkwa Main market throughout the last quarter of the year. A weekly fire drill was introduced after a drill platform was raised and appropriately demarcated to train scheduled employees on how to:

- Prevent domestic and bush fires;
- Call for help in case of fire;
- Determine fire and extinguisher types; and
- Use fire extinguishers.

Plates 31 and 32, showing Rana Motors in fire training briefing and in firefighting training section respectively. Table 8 also gives the type, size and number of fire extinguishers available on the mine.



Plate 31: Showing Rana Motors in fire training briefing



Plate 32: Rana Motors in firefighting training

5.8 Staff Development Programmes

In pursuance of management's commitment to promote knowledge, enhance skills and talents development of its workforce, the Company recognized the need to develop its people so that they become fully equipped with the necessary skills and technology to deliver the Company's business objectives and in support of the Minerals Commission's local content agenda. Ghana Manganese Company (GMC) Ltd supported quite a number of training and development programmes in the year 2015 internally and abroad.

This commitment to training has been congruent with yearly increase in budget allocation for training activities. Under the year of review, all departments of the company benefitted from training programmes. Total amount spent on training for the year under review was US\$ 89,923.77. See table 11 below for summary.

Table 11: Shows Summary of 2015 Training Activities

S/N	Type of training	Purpose of the training	Who conducted the training?	List of Beneficiaries	Participation fee
1	A professional career development programme – April 2015	In connection with GMC's upgrade of employees	Ghana Employers Association	Yvette Adjei-Benn & Ramatu Ali Toure	GHC 1,300

2	A professional career development sponsored programme - May 2015	In connection with GMC's upgrade of employees	Maisie Consult	Twenty (20) Supervisors	GHC 12,600
3	A professional career development programme - May 2015	In connection with GMC's upgrade of employees	Ghana Chamber Of Mines	Churchill Kportufe Yao	
4	A professional career development sponsored programme - May 2015	To deepen EIA knowledge For a responsible and sustainable mining	Ghana Chamber of Mines	Sylvester Zoe	GHC 5,640
5	A professional career development sponsored programme in Environmental related issues - May 2015	To deepen EIA knowledge For a responsible and sustainable mining	Ghana Chamber of Mines	Emmanuel Anum-Coffie	GHC5,640
6	A professional career development sponsored programme in Environmental related issues - May 2015	To deepen EIA knowledge For a responsible and sustainable mining	Ghana Chamber of Mines	Benjamin Asare Ankrah	GHC5,640
7	Continuous professional development sponsored programme - June 2015	Professional career development programme	Minerals Commission Takoradi	Ruth A N Menz	GHC2,000

8	Continuous professional development sponsored programme - June 2015	Professional career development programme	Minerals Commission Takoradi	Michael K. Tsukatah	GHC2,000
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S/N	Type of training	Purpose of the training	Who conducted the training?	List of Beneficiaries	Participation fee
9	Continuous professional development sponsored programme - June 2015	Professional career development programme	Minerals Commission Takoradi	Musah Issah	GHC2,000
10	Continuous professional development programme refresher training - June 2015	Professional career development programme	Geo Community Conference	Geology, Survey and Mine Planning Team	
11	Continuous professional development programme, refresher training - June 2015	Professional career development programme	ATLAS COPCO	Thirty (30) Diamond Drill Team	
12	Continuous professional development programme in excel, refresher training - June 2015	Professional career development programme	Web and Software Company Limited	Twelve (12) HR/ Administration Team	GHC12,000
13	Continuous professional development sponsored programme - June 2015	Professional career development programme	Minerals Commission	Twenty (20) Equipment Operators	GHC20,000
14	Continuous professional development programme –	Professional career development programme	Ghana Institute of Surveyors	Isaac Ekow Anaman	

	August 2015				
15	Continuous professional development programme – August 2015	Professional career development programme	Ghana Institution of Surveyors	Eric Tetteh	

S/N	Type of training	Purpose of the training	Who conducted the training?	List of Beneficiaries	Participation fee
16	A professional career development sponsored programme - July 2015	In connection with GMC's upgrade of employees	Minerals Commission	Sixteen (16) Equipment Operators	GHC 12,600
17	A professional career development sponsored programme - July 2015	In connection with GMC's upgrade of employees	IHRMP	Wisdom Adjei-Mensah	GHC850
18	A professional career development sponsored programme – August 2015	In connection with GMC's upgrade of employees	IPBM	Emmanuel Coffie, Benjamin Asare Ankrah, Solomon Kwame Dankwa, Samuel Osei Twum, Isaac Conduah, Isaac Ekow Anaman, Edem Galley	GHC9,100
19	A professional career development sponsored programme - September 2015	.	NEOEDGE	Francis Fosu	\$4,395

20	A professional career development sponsored programme - December 2015		HR Consultant- Kwadwo Asare Bediako	All HOD's and Superintendents	GHC7,000
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5.9 A Two-Day Workshop on Essential Supervisory Skills

A two-day workshop on essential supervisory skills facilitated by Maisie Consult was conducted at the GMC Function Hall on 8th and 9th May, 2015. A total of twenty-five (25) participants were taken through the role and responsibilities of supervisors, effective communication with subordinate and colleagues, delegation and mentoring, conflict resolution, and case studies. Participants were awarded Certificates of Participation at the end of the workshop. See Plate 33, participants of the supervisory workshop.



Plate 33: Shows participants of the supervisory workshop

5.10 Training in Project Management

As part of the Tarkwa Bansa Community Resettlement Action Plan (RAP), a one – month training on Project Management, facilitated by the Institute of Project and Business Management (IPBM) was held at the New Administration Block. The seven participants trained were awarded Certificates of Participation. See Plate 34, participants of the training on Project Management.



Plate 34: Shows participants of the training on Project Management

5.11 A Five – Day Workshop on Product and Product Application

A five-day workshop on product and product application facilitated by Atlas Copco was conducted at the Senior Staff Club House. A total of 20 participants were taken through how to avoid problems; how to increase productivity; how to make job easier and how to solve any drilling problems. Participants were each awarded Certificate of Participation at the end of the workshop. See Plate 35, participants of the workshop on product and product application held.



Plate 35: Shows participants of the workshop on Product and Product Application

5.12 GMC Sensitization Workshop in 2015

Ghana Manganese Company Limited held a Sensitization Workshop for its employees during the first week of June. The aim was to provide and share information on the global and business specific outlook of the manganese industry and its impact on GMC.

During the workshop, the HR/Administrative Manager, Mr. Wisdom Adjei Mensah, stated that GMC management had created a communication desk led by the PR/Communications office. At the Sensitization Workshop the employees were updated on the business status of the company. The employees were informed about the sudden loss of our major Chinese client in 2014 and the general challenging market outlook for manganese. The workshop was to serve as a forum to discuss the operational and financial impact the sudden loss had on GMC, to harness employees' suggestions on how to overcome internal challenges and the way forward.

The event was well attended by both management and workers and has been indicated as good initiative which will foster healthy relationship between employees and the Company. The employees suggested that the workshop should continue both in good times and in challenging business times. See Plate 36, Sensitization Workshop for GMC employees.



Plate 36: Shows Sensitization Workshop for GMC employees

5.13 GMC Honoured by Top Brass Ghana

Ghana Manganese Company Limited was awarded one of the best mining companies in the Western Region by Top Brass Ghana. The award was in recognition of the company's contribution towards the socio-economic development of the Region. The award was jointly received on behalf of the company by Mr James Atttoh, Port Operations Manager and Mrs

Ramatu Ali Toure, Human Resource Officer. The event was the first ever organized under the name, Western Regional Excellence Award. See Plate 37, the Certificate of best Mining Company in the Western Region.



Plate 37: Shows Certificate of best mining company in the Western Region

In another development, the leadership of Dadwen Schools Complex on behalf of Jochebed Adwobah Bonzo, a former student and recipient of the 57th President's Independence Award for the Best Student in Western Region in the 2013 Basic Education Certificate Examination, also presented the award to management of GMC. Speaking at the presentation held at the company's new office location, Mr Wisdom Adjei Mensah, the HR/Administrative Manager applauded the award recipient and the school for such an academic excellence, and encouraged the school to keep up the good work. He pledged management's continuous support to the school.

5.14 Maiden Ghana Mining Industry Awards 2015

The maiden Ghana Mining Industry Awards 2015 is meant to promote, encourage, recognize, and celebrate outstanding achievements and excellence in the mining industry. The awards will recognize and honour organizations and individuals who have made significant contributions to the mining sector in Ghana. The maiden edition of the Ghana Mining Industry Awards successfully took place as scheduled at the Alisa Hotel in Accra on 3rd December 2015, with Gold Fields Ghana Limited, Tarkwa Mine, emerging as winner of the coveted Mining Company of the Year award. GMC became 1st Runner-Up in the Best Performer in Environmental Management and was equally awarded a Certificate. See Plate 38, the award/certificate received.



Plate 38: Shows 1st Runner-Up Certificate for the Best Performer in Environmental Management

Other big winners on the day were Chirano Gold Mines who won the Best Performer in Environmental Management and also emerged as the first runner-up in Best Performer in Local Content as well as Occupational Health and Safety. Golden Star Wassa Limited won the category on Best Performer in Occupational Health and Safety; while Newmont Golden Ridge, Akyem took home the award for Best Performer in Innovation.

5.15 Mining Law and Policy for Sustainable Development

This is a specialist course from the University of Ghana's (UG) Faculty of Law. The course aims at delivering better awareness of mining laws, policy enforcement in Ghana, and facilitates the exchange of ideas. This unique course is used as a forum to inform and engage with stakeholders. It is an excellent opportunity to engage directly with stakeholders and create lasting, beneficial networks. The course was taught by highly experienced and respected natural resource law lecturers led by Professor Nii Ashie Kotey, former Dean of the Faculty of Law, UG. The Environmental and Community Relations Department participated in the Executive Short Course at the University of Ghana's Faculty of Law, Legon, Accra supported by the University of Western Australia and the Australian Government.

Topics covered included:

- Overviews of Ghana's current mining policy and the African Mining Vision;
- Mining, environmental and health & safety laws;
- EPA regulatory permitting process and environmental protection;
- Land and Mineral Ownership regime in Ghana, including conflicting rights;

- Licensing process and rights associated with transfer, surrender, suspension;
- Impact and legal framework of small scale mining;
- International standards and corporate social obligations of mining companies; and
- Negotiation issues and skills in the mining sector.

This course is an outcome of a new partnership between the University of Ghana and the University of Western Australia, funded by the Australian Aid Programme and managed under the auspices of the International Mining for Development Centre. The course has been run twice already to a very positive feedback from attendees, and offers an excellent opportunity for stakeholders from all sectors to gain a good understanding of the Legal and Policy frameworks that govern the mining sector in Ghana. See Plates 39 and 40, group picture of participants and lecture session at the University of Ghana respectively.



Plate 39: Shows group picture of participants



Plate 40: Shows lecture session at the University of Ghana

5.16 Ghana Chamber of Mines' EIA Seminar

GMC was represented by the Environment and Community and Mine Planning Departments at the EIA seminar organized by the Ghana Chamber of Mines at the Royal Senchi. The objective of the seminar was to bring the regulator (EPA) and Mining companies together to have innovative and effective ways of resolving challenges associated with environmental permits and certificates. See Plates 41 and 42, participants from the mining industry, and the Honourable Minister and Chamber of Mines leadership respectively.



Plate 41: Shows participants from the mining Industry



Plate 42: Shows the Honourable Minister, and Chamber of Mines leadership

The Honourable Minister, Mahama Ayariga, in his keynote address acknowledged EPA's current personnel challenges which lead to permit delays and proposed the following measures as the way forward:

- Outsource work to KNUST, CSIR, and other institutions under the ministry to facilitate actions and expeditiously deal with permit application timelines;
- Development of a permit application tracking system to track the permitting process; and
- Mining companies should embark on community education and consultation on mining projects and promptly solve issues, so that permits can be issued on time.

6.0 INFRASTRUCTURE IMPROVEMENTS IN 2015

6.1 Nsuta Infrastructure

Bungalow Numbers 39 and 47 were refurbished. Masonry works were undertaken on walls and the floors. Carpentry works such as changing of locks, repairing of doors, kitchen cabinet, windows and mosquito netting were also done. Total cost on employees' accommodation renovation and New Office (security office) project amounted to \$35,466.54. See Plates 43 and 44, the refurbished bungalows.



Plate 43: Shows refurbished Bungalow No. 39



Plate 44: Shows refurbished Bungalow No. 47

Bungalow No. 47 which has terrazzo floor was contracted to be polished. Painting was done in all the rooms of the two bungalows mentioned above. The refurbishment jobs were all done by the GMC's maintenance and repairs section, except the polishing of the terrazzo floor.

6.2 A New Contaminated Water Storage Tank

A new Contaminated Water Storage Tank was constructed at the hospital to store all contaminated waters coming from the laboratory and the theatre for subsequent disposal at a designated area. The tank was designed to be dislodged and sent to the liquid waste site. The project was contracted to K. Kansco Construction. See Plates 45 and 46, showing Contaminated Water Storage Tank constructed at the hospital.



Plates 45 and 46: Showing New Contaminated Water Storage Tank constructed at the hospital

6.3 Water Tanks (Poly-tanks)

A new poly-tank of 10,000-litre capacity was used to replace the old one which was 6,000-litre at the hospital due to shortage of water at times. This work was carried out by GMC's maintenance team of plumbers.

6.4 Tennis Court

A new tennis court was constructed at the junior staff club house for junior staff employees. The area used was formally the dancing hall of the club house. This project was contracted to Track Vision Consult. See Plate 47, the new tennis court constructed.



Plate 47: Shows the new tennis court constructed at the junior staff club house for junior staff employees

6.5 Canteen Renovation

General renovation works were done on the canteen building by Kansco Construction. See Plates 48 and 49 below for some of the canteen facelifts. Work done included:

- Roofing sheets were changed from short span to long span because of leakages;
- The ceiling was changed from plywood into plastic T&J;
- All surface drains including those at the butchery and washing area were converted into underground drainage;
- The main drainage behind the building was covered with concrete slabs;
- The kitchen was upgraded by extending the cooking area, pantry, butchery, washing area and a new place was created for bakery. Both walls and floors were tiled;
- New change house was built for the canteen workers, and employees of Commercial (warehouse) and Electrical departments;
- Two (2) toilets and 2 washrooms; one each for males and females respectively, were built for employees with Canteen, Commercial (warehouse) and Electrical departments;

- Lookers were built, and one each allocated to the canteen workers;
- The canteen counter was tiled and framed glass mounted on top of it to serve as a barrier between the person serving and those who are collecting their food;
- The old galvanised wash-hand basin was replaced with a tiled concrete one affixed with new tabs;
- Behind the kitchen, a new place was prepared for housing a gas bottle (cylinder) for the use of cooking and baking.



Plate 48: Shows the upgraded food serving counter Plate 49: Shows the new wash-hand basin constructed

6.6 Hospital Theatre

General renovation works were undertaken at the hospital's theatre. Among the renovation works included new electrical works, change of ceiling from plywood to plaster board, change of louvre blades windows to glass sliding windows, tiled floors and two offices with toilets constructed for the theatre medical doctors and theatre nurses. Internal painting took place at the theatre and the theatre offices. The main ward was painted and the ceilings outside were also changed. This project was contracted to K. Kansco Construction. See Plates 50 and 51 showing renovation works at the hospital's theatre.



Plate 50: Shows renovation works at the theatre Plate 51: Shows interior design of the

6.7 Refurbishment of Director's Bungalow

During the year 2015, the Director's Bungalow which accommodates Presidents, Ministers and VIPs visiting the mine was entirely renovated and upgraded to a modern status at the cost of USD (\$) 380,000. The old structure which was built with treated and imported timber during the colonial era was sandblasted and refurbished. The scope was to maintain the cultural heritage of GMC which demonstrates long-age and good maintenance practices. A complete up-to-date electric installations that save energy, LED illumination, were installed throughout the building, and state-of-the-art thermal efficiencies reduced the energy footprint from the window to the barest minimum. Windows with a thermal transmittance of better than $\Phi=1.2\text{W/m}^2\cdot\text{K}$ reduced the demand for air conditioning to a minimum.

During the year under review, the following structural changes were carried out:

- The foundational structure was maintained;
- Main Structure was removed;
- Worn out timbers were replaced;
- Re-roofing with shingle roofing;
- Windows replaced with double glassing;
- Bathroom received re-tiling;
- Wall facades were replaced with new UPVC panels.

See Plates 52 and 53 showing high efficiency glassworks and front view of the Director's Bungalow.



Plate 52: Showing high efficiency glass works



Plate 53: Showing the front view of the Director's Bungalow

6.8 Civil Projects Undertaken in 2015

In 2015, Ghana Manganese Company Limited constructed a security post at the entrance to the New Administration Building premises. The main objective was to increase security at the new office as people and animals had had easy access to the said area. The new security office was

constructed to house the security men at the new administration. The new security building comprises a main office and a waiting room where visitors would be required to report for the necessary security checks. A visitor or visitors would have to wait and entertain themselves in the waiting room for their host. A kitchen which could be used as canteen for the security men on duty was built in. Toilet facilities and a technician/technical room which houses all the control systems such as the CCTV cameras, boom gates, etc are also part of this new edifice. Plates 54 and 55 are images of the new security office constructed to house security at the administration.



Plates 54 and 55: Show the new security office constructed at the Administration Block

6.8.1 Construction of Pit A Culvert near Akyem

A culvert structure was constructed at Pit A near Akyem by the recommendation of the Inspectorate Division of the Minerals Commission (IDMC) to direct water from Pit A to join the Kawere stream. This is due to the seasonal floods that make the road impassable. The company decided to construct this culvert as a lasting solution to this problem. See Plates 56 and 57, the culvert at Pit A near Akyem.



Plates 56 and 57: Show the culvert constructed at Pit A, near Akyem

6.8.2 Road Surfacing

The existing roads were resurfaced with bitumen seal to increase the lifespan of the roads on the mine village and bungalows.

6.8.3 Installation of Control Valve

A control valve was constructed at the exit of the Esuabena Pond to control flow of water from the pond into other water bodies, specifically, the Kawere stream