

## Auditor Credentials Form International Cyanide Management Code Audit

**Facility Audited:** Chirano Gold Mines Ltd. (CGML)

**Audit Date:** 23<sup>rd</sup> to 29<sup>th</sup> May 2016

### Lead Auditor Credentials

- **Lead Auditor:** Clinton Phaal – IEMA Registered Environmental Auditor, Ramboll Environ Africa Pty Ltd, Johannesburg, Gauteng, South Africa
- **Certifying Organization:**  
Institute of Environmental Management and Assessment (IEMA)  
Saracen House, Crusader Road  
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### Technical Auditor Credentials

- **Technical Auditor:** John Lambert, P. Geo., CEA, Ramboll Environ Canada Inc.
- **Auditor Certification No.:** 2000043
- **Certifying Organization:**  
CECAB  
(Canadian Environmental Certification Approvals Board)  
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### Lead Auditor Experience

Clinton Phaal – Ramboll Environ Africa Pty Ltd (South Africa)

Year	Type of Facility/Type of Audit Led	Country & State/Province
2016	Lead Auditor: On behalf of Flint Group, completed environmental and health and safety compliance audits of eight printing ink facilities located throughout South Africa	Western Cape, Eastern Cape, Kwazulu Natal, Gauteng, South Africa

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Year	Type of Facility/Type of Audit Led	Country & State/Province
2016	Auditor: Part of a multidisciplinary team assessing environmental compliance liabilities relating to a large portfolio (approximately 800 sites) of fuel retail sites and depots located throughout South Africa and Botswana	South Africa, Botswana
2016	Lead Auditor: Golden Star Resources, Ghana. Led the Audit for the ICMC (International Cyanide Management Code) recertification of the Wassa gold mining operations	Accra, Ghana
2015-2016	Project Manager and Lead Auditor: Environmental Due Diligence review of SunChemical Corporation printing ink facility located in Maitland, Cape Town, to identify any significant environmental liabilities, specifically relating to potential impacts to soil and groundwater.	Cape Town, South Africa
2015	Project Manager and Reviewer: Support to Bauba Platinum Limited for the development of three Greenfield underground platinum mines within the Limpopo Province of South Africa including a scoping process as part of the EIA Phase for the project	Limpopo Province, South Africa
2015	Project Manager and Lead Auditor: On behalf of Chromaflo, conducted a Phase I Environmental Site Assessment to determine pre-lease baseline conditions for a proposed ink manufacturing facility in Johannesburg, South Africa.	Gauteng, South Africa
2015	Project Manager: On behalf of TOTAL completed compliance audits of 18 fuel retail sites located across Botswana to evaluate and assess the compliance of the current operational activities against Environmental Management Plans (EMPs) developed for the sites.	Botswana
2015	Project Manager and Auditor: Environmental Due Diligence review of SunChemical Corporation's printing ink facility in Robertsham, Johannesburg, to identify any significant environmental liabilities, specifically relating to potential impacts to soil and groundwater and compliance issues.	Johannesburg, South Africa
2015	Project Reviewer: Managed and reviewed an assessment and verification audit of AfriSam's Springvalley Quarry Environmental Management Programme Report (EMPR) in accordance with Regulation 55 of the Mineral and Petroleum Resources Development Act (MPRDA).	Lichtenburg, South Africa

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2015	Auditor: International Cyanide Management Code (ICMC) pre-assessment of the Golden Star Resources Wassa Mine in Ghana in January 2015, in advance of the ICMC recertification audit.	Accra, Ghana
2015	Project Manager: Project managed and reviewed an environmental compliance audit of DB Thermal located in Nigel.	Nigel, South Africa
2015	Project Manager: of pre-acquisition environmental due diligence site assessments and compliance audits of four Nampak packaging facilities located in Durban, Cape Town and Port Elizabeth.	Durban, Cape Town and Port Elizabeth, South Africa
2014	Lead Auditor: On behalf of Kinross Gold Corporations conducted an International Cyanide Management Code (ICMC) re-certification audit of Kinross Gold Mine located in Fairbanks, Alaska. The audit team conducted a detailed examination of cyanide management practices in the nine areas required by the ICMC.	Fairbanks, Alaska
2014	Lead Auditor: Completed an environmental due diligence liability assessment and compliance audit of a carbon black production facility for Orion Engineered Carbons.	Port Elizabeth, South Africa
2013	Lead Auditor: on behalf of Albemarle Corporation completed an environmental compliance audit of the Jordan Bromine Company UBC facility located in the Safi region of Jordan and storage and shipping facility at Aqaba on the Red Sea.	Safi, Jordan
2013	Lead Auditor: Environmental Health and Safety compliance audit of a Givaudan flavours production facility located in Tulisa Park, Johannesburg.	Johannesburg, South Africa
2013	Lead Assessor: Completed a high level environmental risk assessment (ERA) of over 5000 fuel retail forecourt and commercial properties located throughout South Africa. The objective of the assessment was to prioritise sites for further investigations.	Nationwide, South Africa
2013	Project Manager: Environmental Site Assessments of 89 fuel retail stations throughout north eastern South Africa. The scope of work included targeted soil and groundwater sampling and interpretation of analyses.	North East, South Africa

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2013	Project Manager: for a high level environmental site assessment of approximately 2000 hectares of land formally associated with a chemical facility on behalf of a prospective developer. The purpose of the assessment was specifically to identify any contaminated land liabilities.	Gauteng, South Africa
2013	Project Manager: for pre-acquisition environmental due diligence (EDD) on behalf of buyer. Site activities included industrial pump assembly and the manufacture of urethane pipe lining for Clyde Blowers in Richards Bay, South Africa.	Richards Bay, South Africa
2012-2013	Lead Auditor: On behalf of Total South Africa, managed and completed environmental reviews and site assessments including contamination audits of 13 fuel retail stations located throughout 4 Provinces in South Africa.	Gauteng, Mpumalanga and Limpopo Provinces, South Africa
2011-2012	Lead Auditor: Environmental review, site assessment and project brief prepared in support of an Environmental Authorisation in accordance with Ugandan regulations for Environmental Impact Assessments.	Uganda
2012	Project Manager and Lead Auditor for pre-acquisition due diligence assessments of 14 storage warehouses, a pasta production plant and flour mill in Abidjan.	Abidjan, Cote d'Ivoire.
2012	Technical Auditor: Involved in the pre-acquisition EDD assessment of a former steel foundry site and soap production plant in Abidjan and Bonoua, Cote d'Ivoire, included managing an intrusive ground investigation.	Abidjan and Bonoua Cote d'Ivoire.
2012	Project Manager and Auditor: Environmental and compliance assessment of three ink packaging and mixing facilities as part of a divestiture process in Cape Town, Durban and Johannesburg, South Africa. The scope of work consisted of a site visit and review of site operations and existing documentation to identify potential environmental liabilities.	Cape Town, Durban and Johannesburg, South Africa

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2012-2013	Conducted an environmental assessment of a site for the proposed construction of a fertiliser blending plant in Tema, Ghana. The scope of work included a review of permitting requirements through the environmental impact assessment (EIA) process and identification of environmental restrictions to development.	Tema, Ghana
2010-2013	Project Manager and Lead Auditor: overseeing compliance audits of three oil and gas industry support and service centres located in Luanda.	Luanda, Angola
2011	Project Manager: Pre entry environmental site assessment (ESA) of the ABS Alloys and Metals SA facility located in Isando, South Africa.	Johannesburg, South Africa
2011	Manager: Pre acquisition EDD audit and site investigation of an industrial facility manufacturing specialist submersible pump parts for the offshore oil and gas industry in Chonburi Province, Thailand.	Chonburi, Thailand
2011	Prepared environmental registers and a compliance review for a communications network provider with on area of operations in South Africa	Johannesburg, South Africa
2011	Project Manager: Managed and completed a high level ESA of the Zincor (Exxoro) electrolytic zinc refinery located near Springs, South Africa.	Gauteng, South Africa
2009-2010	Lead staff overseer: Provision of support to aluminium processing facilities in a number of international locations for environmental, health and safety (EHS) audits.	International
2009	Project coordinator: Environmental Due Diligence audits of over 30 chemical facilities servicing the offshore drilling industry in Canada. Work comprised site visits, soil sampling and reporting within three weeks of commission.	Canada
2009	Project Manager and Lead Auditor: Pre-acquisition environmental audits of facilities fabricating specialised oil drilling equipment within the Russian Federation.	Russia

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2008-2010	Integral to establishing an environmental management team seconded to the client during the construction phase of a new coal fired power station in the Limpopo province for Eskom South Africa. Completed benchmarking audits and provided on-going auditing services and strategic environmental support during construction. Additionally, seconded over a short period as environmental manager for the project.	Limpopo Province, South Africa
2009	Completed pre-acquisition environmental due diligence audits of a food production and vegetable oil plant in the Kherson Oblast, Ukraine for a confidential client.	Kherson Oblast, Ukraine
2009	Project Manager: Environmental due diligence audit process for the establishment of oil and gas support services and storage yard in Erbil, Kurdistan	Erbil, Kurdistan
2008	<i>Project Manager: EHS audits of facilities located in Pakistan, France and Tunisia for a confidential client.</i>	<i>Pakistan, France and Tunisia</i>
2008	Project Manager: Environmental audit of an oil and gas industry service centre located in Luanda and prepared an environmental impact statement for a proposed base expansion and blend plant installation on behalf of Baker Hughes Angola.	Luanda, Angola
2008	Project Manager: Pre-acquisition due diligence assessment and targeted intrusive investigation of a metal recycling facility in Chorzow, Poland for Celsa.	Chorzow, Poland
2008	Manager: Environmental due diligence audit of an industrial oil and lubricant target company in Germany for a US client.	Germany
2007	Project Manager: Pre acquisition due diligence audit of a steel works in Donetsk, Ukraine for Celsa.	Donetsk, Ukraine
2007	Manager: Environmental due diligence audit of a proposed gas pipeline onshore reception facility near Ashkelon, Israel for BG Group in accordance with IFC guidelines.	Ashkelon, Israel

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2006-2007	Project Manager: Pre-acquisition and developmental environmental assessment for the construction of a nitrogen plant and a watching/auditing brief during subsequent construction phase.	UK
2006	Undertook pre-acquisition due diligence audits of cotton processing sites located in South Africa, Malawi and Zambia for a cotton commodities business.	South Africa, Malawi and Zambia
2005	Project Manager: Managed and completed environmental due diligence audits and subsequent intrusive investigations of a vegetable oil refinery in Podari and an oil bottling plant in Craiova, Romania for Cargill. Provided input to subsequent remedial works.	Craiova, Romania
2003	Completed Phase I Environmental due diligence assessments of more than 50 sites in Romania for a confidential client. Subsequent Phase II intrusive investigations were completed on a further seven facilities.	Romania

**Technical Auditor**

John Lambert, P. Geo., CEA, Ramboll Environ (Canada) Inc.

Year	Type of Facility/Type of Audit Led	Country & State/Province
2016	Anqing Shuguang Supply, Sales and Transportation Co., Ltd (ASSST), ICMC re-certification audit of ASSST's China cyanide transportation supply chain, China	China
2016	Saratovgintez LLC, ICMC pre-assessment audit of cyanide production facility located in Saratov, Russia	Russia
2016	Kinross Gold Corporation, ICMC certification audit of the Tasiast Mine in Mauritania	Mauritania
2016	Kinross Gold Corporation, ICMC pre-assessment audit of the Chirano Mine in Ghana	Ghana
2015	Centerra Gold Inc, Lead Auditor for ICMC re-certification audit of Kumtor Gold Mine	Kyrgyzstan

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Year	Type of Facility/Type of Audit Led	Country & State/Province
2015	Centerra Gold Inc, Lead Auditor for ICMC re-certification audit of Kumtor transportation supply chain	Kyrgyzstan
2015	SOGECO (Société générale de consignation et d'entreprises maritimes), Technical and lead auditor for ICMC certification audit of the SOGECO cyanide transportation between the Port of Nouakchott and the Tasiast Gold Mine, Mauritania.	Mauritania
2014	Kinross Gold Corporation, ICMC readiness review of the Tasiast Mine in Mauritania	Mauritania
2015	Golden Star Resources, Ghana. Technical Auditor for the ICMC interim audit of the Wassa gold mining operations	Ghana
2014	Agnico-Eagle Mines Limited, Technical auditor for the ICMC certification audit of the Meadowbank Gold Mine in Nunavut, Canada.	Canada
2014	Agnico-Eagle Mines Limited, Technical auditor for the ICMC certification audit of the Meadowbank Cyanide Transport Supply Chain between the Port of Bécancour, Quebec and the Meadowbank Gold Mine in Nunavuk, Canada.	Canada
2014	GV Gold Limited. Technical auditor for a preliminary Cyanide Code review of the Vusochayshiy Gold Mine, located near Bodaybo, in the Irkutsk oblast in the east of Russia	Irkutsk, Russia
2014	Kinross Gold Corporation, ICMC pre-assessment audit of the Tasiast Mine in Mauritania	Mauritania
2013	Azot, Rustavi, Georgia, Lead auditor for a precertification audit of their cyanide production plant in Rustavi, Georgia.	Federation of Georgia
2013	Eldorado Gold, Kisladag Mine, Turkey. Technical auditor for the ICMC certification audit of the Kisladag Gold Mine	Turkey
2013	Kinross Gold Corporation, Lead Auditor for the ICMC recertification audit of the Kupol Mine	Chukotka A.O., Russian Federation
2013	Kinross Gold, Chukotka Mining and Geological Company (CMGC) Transportation Group, Lead auditor for ICMC recertification audit, of the Pevek to Kupol Cyanide Transportation Route	Chukotka A.O., Russian Federation
2012	Kinross Gold Corporation, Technical auditor for the ICMC certification audit of the Kinross Chirano mine	Ghana
2012	Centerra Gold Inc., Boroo Supply Route, Mongolia Lead	China and Mongolia



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	Auditor for the ICMC Certification audit of the cyanide transportation route between Chinese/ Mongolian Border and the Boroo Mine Site, a distance of approximately 740 km	
2012	Agnico-Eagle Mines Limited. Lead auditor for a preliminary Cyanide Code review of the Pinos Altos Gold Mine	Chihuahua, Mexico
2012	Golden Star Resources, Ghana. Lead Auditor for the ICMC recertification audit of the Bogoso/Prestea gold mining operations	Ghana
2012	Golden Star Resources, Ghana. Lead Auditor for the ICMC recertification audit of the Wassa gold mining operations	Ghana
2012	Thompson Creek Minerals, Canada. Environmental auditor for environmental compliance audits of the Endako Molybdenum mine and Mt. Million gold mine project in northern British Columbia. Audit focused on air emissions, water and waste water management, solid waste management, dangerous goods and hazardous waste storage and transportation, and mine reclamation	British Columbia, Canada
2012	Kinross Gold Corporation, Kettle River Operations, Lead Auditor for a Cyanide Code recertification Audit of the Kettle River Operations, Washington	Washington, USA
2012	Minera Mexicana La Cienega S.A. de C.V. Lead auditor for a precertification audit of the La Cienega Mine operation	Durango, Mexico
2012	Minera Frisco S.A.B. de C.V, Unidad San Felipe Lead auditor for a preliminary ICMC review of the San Felipe Mine	Baja California, Mexico
2012	Kinross Gold Corporation, Compañía Minera Maricunga, Chile Lead Auditor for the Cyanide Code recertification Audit of the Compañía Minera Maricunga, Maricunga Mine	Chile
2011	Centerra Gold Inc., Lead Auditor ICMC Certification Audit of the Kumtor Operation Company, Kumtor Mine	Kyrgyzstan
2011	Centerra Gold Inc., Lead Auditor ICMC Certification for the Kumtor Transportation Operation, Kyrgyz Republic.	Kyrgyzstan
2011	Minera Mexico, Lead Auditor for an ICMC preassessment of the La Cienega Mine	Mexico
2011	Golden Star Resources, Lead Auditor for ICMC Interim Audits, Bogoso/Prestea and Wassa Operations	Ghana
2010	Kinross Gold Corporation, Lead Auditor for the ICMC	Chile

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	Certification Audit of Mantos de Oro Mine	
2010	AngloGold Ashanti (Colorado) Corp. and Golden Cycle Gold Corporation joint venture, Lead Auditor for the ICMC recertification audit of Cripple Creek & Victor Gold Mining Company, Cripple Creek Mine	Colorado, USA
2009	Kinross Gold Corporation, Lead Auditor for the ICMC certification audit of the Kupol Mine	Chukotka A.O., Russian Federation
2008	Golden Star Resources, Lead Auditor for the ICMC certification audit for the Wassa Mine operations	Ghana
2008	Golden Star Resources, Lead Auditor for the ICMC certification audit for the Bogoso/Prestea Mine operations	Ghana
2008	Kinross Gold Corporation, Lead Auditor for the ICMC certification audit for the Kettle River Mine operations	Washington, USA
2008	Kinross Gold Corporation, Lead Auditor for the ICMC certification audit for the Compañia Minera Maricunga (CMM) Mine operations	Chile
2008	ICMC corrective action progress monitoring (CMM) and preassessment for La Coipa Mine [Kinross Gold Corporation operations]	Chile
2008	ICMC preassessment, Golden Star Resources, Bogoso/Prestea and Wassa Operations	Ghana
2007	Kinross Gold Corporation, Lead Auditor for the ICMC certification audit of the Fairbanks Gold Mining Inc. Fort Knox Mine operations	Alaska, USA
2007	AngloGold Ashanti (Colorado) Corp. and Golden Cycle Gold Corporation joint venture, Lead Auditor for the ICMC certification audit of Cripple Creek & Victor Gold Mining Company, Cripple Creek Mine	Colorado, USA
2006	Kinross Gold Corporation, Lead Auditor for the ICMC certification audit of Round Mountain Gold Corporation (a Kinross/Barrick joint venture)	Nevada, USA
2005	Alcoa Inc., Lead Auditor for an environmental compliance audit of an aluminium extrusion and fabrication plant in Alberta. Scope of the audit evaluated plant operations against federal, provincial and municipal legislation.	Alberta, Canada
2003	BC Hydro, Lead Auditor for an ISO 14001 EMS audit of the BC Hydro's Construction Business Unit (CBU). The audit client was BC Hydro Corporate. The scope of the audit	British Columbia, Canada



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	included CBU's main office, field operations facilities in Surrey and Kamloops and one capital project. The audit criteria were CBU's environmental management system; there were two members of the audit team.	
2001	Canadian Coast Guard, Lead Auditor for audits of three Canadian Coast Guard (CCG) Bases located in Prince Rupert, Victoria and Sydney, British Columbia, for the BC Department of Fisheries. The audit subject included environmental management systems (EMS), environmental compliance, solid waste, water and energy use and efficiency and the scope was limited to onshore facilities (workshops, ship repair, buoy painting and maintenance, helicopter base, research facilities, marine search and rescue and warehouse support). Audit criteria included federal, provincial and applicable municipal legislation, and the CCG EMS. The team comprised six auditors and the field work was undertaken over a period of 4 weeks.	British Columbia, Canada
2006	Syncrude Canada Ltd., one of a team of four auditors on an environmental health and safety audit of Syncrude's main oil sands Aurora open pit mine site 60km north of Fort MacMurray, Alberta. The scope of the audit included all aspects of mine planning, operations, maintenance and closure, as well as then oil hydrotreaters and slurry pipeline to the refinery. The audit criteria were Syncrude's EMS and environmental health and safety procedures. The audit included compliance to the Mine Permit and federal and provincial legal requirements.	Alberta, Canada
2005	Syncrude Canada Ltd., one of a team of four auditors on an environmental health and safety audit of Syncrude's main oil sands open pit mine site in Fort MacMurray, Alberta. The scope of the audit included all aspects of mine planning, operations, maintenance and closure. The audit criteria were Syncrude's EMS and environmental health and safety procedures. The audit included compliance to Mine Permit and federal and provincial legal requirements.	Alberta, Canada
2005	Syncrude Canada Ltd., one of a team of three auditors on an environmental health and safety audit of Syncrude's Central Maintenance Supply Services Division in Fort MacMurray, Alberta. This group is responsible for equipment maintenance, warehousing and worker supply. The scope of the audit included facility operations and maintenance and contract management. The audit criteria were Syncrude's EMS and environmental health and safety procedures; included verification of compliance with federal and provincial legal requirements.	Alberta, Canada

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### Statement of No Conflict

I certify that I have not audited any component of this facility for which I was responsible for design or development; nor have I within the past year been an employee of the facility, its parent company, or associated affiliates. Excluding audits, I have not derived more than 30% of my income within the past 5 years from the facility, its parent, or associated affiliates. I have not participated in more than two consecutive Cyanide Code audits of this facility. I have participated in at least 3 health, safety, and/or environmental audits in the past 7 years and am familiar with standard audit procedures as well as with the protocols developed by the International Cyanide Management Institute for implementation of the Code.

<b>Signed,</b>	<b>Name</b>	<b>Signature</b>	<b>Date</b>
<b>Lead Auditor*</b>	Clinton Phaal		2016
<b>Technical Auditor</b>	John Lambert		07 November 2016

\* Notarized as indicated



I certify that the above statement is true and correct and that the deponent has acknowledged that he/she knows and understands the contents of this statement. This statement was sworn/declared before me and deponent's signature/mark/thumbprint was placed thereon in my presence.

to SANDTON on 2016-11-14 at 11:21

05312256  
Sjt

(HANTEKENING) KOMMISSARIS VAN EDE  
(SIGNATURE) COMMISSIONER OF OATHS

MOSES KURBAN  
VOLLE VOORNAME EN VAN IN DRUKSKRIEF  
FULL FIRST NAMES AND SURNAME IN BLOCK LETTERS

2 Summit Rd  
RESIGHEIDSADRES (STRAATADRES)  
BUSINESS ADDRESS (STREET ADDRESS)

14 Loring'side  
Sjt

SA POLISIEDIENS  
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