

INTERNATIONAL CYANIDE MANAGEMENT INSTITUTE

AUDITOR CREDENTIALS FORM

Facility Audited Barrick - Williams Operating Division

Date of Audit March 2 - 6, 2020

Auditor and Technical Specialist Credentials

Lead Auditor
Auditor Certification
Certifying Organization
Address

Telephone Number Email Address

Michelle Gillen	
EP(CEA), Number 3855	
CECAB, www.cecab.org	
2010-120 Adelaide Street West	
Toronto, ON, Canada	

416-646-3608

michelle.gillen@erm.com

Audit Experience (Minimum experience: 3 Audits in past 7 years as Lead Auditor)

Year	Type of Audit	Type of Facility	Location	
2020	CN Code Pre-Audit	Gold Mining Operation	Canada, Quebec	
2019	CN Code Gap Assessment	Gold Mining Operation	USA, South Carolina	
2016	CN Code Certification	Gold Mining Operation	USA, Nevada	
2016	CN Code Certification	Gold Mining Operation	Canada, Ontario	
2020	HSE Audit	Various Mining Operations	Across Canada	
2019	HSE Audit	Various Mining Operations	Across Canada	
2018	HSE Audit	Various Mining Operations	Across Canada	
2017	HSE Audit	Various Mining Operations	Across Canada	

Cyanide Related Operations Experience

(Each Auditor must have at least 3 years; at least one auditor must have at least 7 years experience)

Auditor	Years Experience	Relevant Position Titles	Types of Operations	
Michelle Gillen	18	HSE Consultant	EHS Consulting to Mining	
			HSE Audits at Mines	
Glenn Keays	2	Technical Director	EHS Consulting to Mining	
	3	VP, HSE	Manufacturing	
	5	Principal Consultant	EHS Consulting to Mining	
	2	Technical Manager	Kraft Pulping and Chemical	
	8	Lead Auditor	EHS Certification Body	

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

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 wihin the past 5 years from the facility its parent, or associated affiliates. I have not participated in more than three consecutive Cynide Code audits of this fcility. I have participated in at leat three health, safety and/or environmental audits int he past 7 years and am familiar with standard audit procedures as well with the protocols developed by the International Cyanide Management Institute for implementation of the Code.

Signed	Name	Signature		Date
Lead Auditor*	Michelle Gillen	Th		10-May-21
Mining Technical Specialist	Glenn Keays	Sarkeay		10-May-21
	nature must be certified by no	0		
Notarization				
Country Canada	>			
Province / State				
County Guelph, U	vellington			
Subscribed and swor	n (or affirmed) before me t	his day,	(month)	of <u>202</u>) (year)
(name of signer				
		SA		
		(N	otary signature)

YOSHEEL BALA BANGAROO

Barrister, Solicitor, Notary Public and a Commissioner for Oaths in and for Ontario. LSO #69316M



Michelle Gillen, BSc, EP(CEA)

Principal Consultant

Michelle Gillen is an environmental scientist and Certified Environmental Auditor (CEA) with over 18 years' experience. She currently concentrates on environmental, health & safety compliance, and management systems auditing as well as EHS culture assessment s and utilizing enhanced auditing techniques.

Ms. Gillen has completed numerous audits across Canada at a variety of industrial facilities including mining, aerospace, automotive, chemical, food processing and pharmaceutical facilities and is a verification service provider under the Mining Association of Canada's Towards Sustainable Mining and a Cyanide Code Auditor



Experience: 18 + years' experience in the mining, oil and gas, chemical, manufacturing, and pharmaceutical sectors.

Email: Michelle.Gillen@erm.com

LinkedIn: https://www.linkedin.com/in/michellegillen-a4912832

Education

- Environmental Engineering Applications,
 Conestoga College, Kitchener, Ontario, 2000
- B.Sc. (Honours), Environmental Science, University of Waterloo, Waterloo, Ontario, 1999

Professional Affiliations and Registrations

- Environmental Professional, Certified
 Environmental Auditor (Auditing Association of Canada) since 2005
- Verification Service Provider (VSP), Towards Sustainable Mining
- Certified Lead Auditor International ICMI Cyanide Management Institute

Languages

English, native speaker

Fields of Competence

- EHS Compliance Audits
- ICMI Cyanide Code Certification Audits
- Management System Audits (ISO 14001, OHSAS 18001, Health, Safety, Environment, and Community)
- Due Diligence Assessments, (including Phase I and IIs)
- Regulatory Reviews
- Towards Sustainable Mining Verification Service Provider
- Site Investigations

Key Industry Sectors

- Mining and metals
- Petrochemical
- Oil & gas
- Chemical
- Pulp & paper



Key Projects

Mining and Metals

Gold Mine, Quebec

Recently completed a readiness assessment of a gold mine in Quebec to confirm their level of preparedness to undergo their initial Cyanide Code Certification.

Gold Mine, Nevada

Lead auditor of cyanide code verification audit at a gold mine in Nevada. Topics assessed included health and safety, storage and handling, training and emergency response.

Gold Mine, South Carolina

Completed a gap assessment audit of a gold mine in South Carolina. The gap assessment was the first formal assessment of the operations performance with respect to the ICMI code requirements. Follow up activities included providing assistance to the operation to address gaps.

Gold Mine, Ontario

Completed a gap assessment audit of a gold mine in Ontario. The operation was considering becoming a signatory to the code and wanted to understand the existing gaps and actions needed to become compliant. The gap assessment was the first formal assessment of the operations performance with respect to the ICMI code requirements.

Gold Mine, Ontario

Lead auditor of cyanide code verification audit at a gold mine in Nevada. Topics assessed included health and safety, storage and handling, training and emergency response.

Tailings Dam Management, British Columbia

Lead auditor verifying the implementation of the Towards Sustainable Mining framework for Tailings Management of a mine in British Columbia. The TSM framework follows closely to the ISO14001 management system framework.

Rare Minerals Mine, Manitoba

Member of an EHS audit team for an audit of a tantalum mine in Manitoba. Topics included waste and transport of dangerous goods. Project included developing a protocol detailing EHS regulatory requirements for the site.

Lead Smelter, British Columbia

Environmental auditor on an EHS compliance audit at a Lead Smelter. Topic areas covered included hazardous and non-hazardous waste management including import and export, and the transport of dangerous goods. Other waste topics included landfill management and environmental emergencies.

Nickel Mines, Ontario

Auditor for a corporate management system of nickel mines and the associated smelter in Ontario. Evaluated the Health, Safety, Environmental and Community management systems for legal compliance, environmental management, and product stewardship.

Zinc Refinery, Quebec

Conducted a Post Due Diligence Assessment HSEC audit of a zinc refinery in Quebec as part of a global post due diligence assessment. Evaluated soil and groundwater conditions, closure plans, and operational compliance to identify liabilities.

Copper Refinery, Ontario

Prepared a legal registry of a copper refinery located in northern Ontario. The registry identified key environmental, health, safety and community requirements.

Potash Mine, Saskatchewan

Lead EH&S auditor on a risk assessment for environmental insurance policy. Identified key risks affecting policy.

Gold Mines, Ontario, US

Conducted a series of safety culture assessments at gold mine operations in Ontario and portions of the US. The process involved working with leaders in the organization to identify safety performance breakdowns in the field. Follow up coaching activities occurred with leaders in the organization to help them improve on their safety interventions and interactions with front line workers.

Oil and Gas

Oil Sands Operation, Alberta

Conducted a series of safety culture assessments at an oil sands operation. The process involved working with leaders in the organization to identify safety performance breakdowns in the field. Follow up coaching activities occurred with leaders in the organization to help them improve on their safety interventions and interactions with front line workers.

Pipeline Terminal, Alberta

Team member on an EHS audit of a crude oil and condensate storage terminal and pumping station in Alberta. Topics include safe work permitting, risk assessment, truck and tanker operations, emergency response, and pipeline integrity.

Oil Sands Operation, Alberta

Conducted a series of environmental audits at an oil sands operation in Alberta. The audit went beyond basic compliance and looked to assess risks of future non-compliance based on the level of programs and processes implemented, including operating procedures, assignment of roles and responsibilities as well as the effectiveness of training programs.

Chemical Manufacturing

Chemical Manufacturer, Alberta and Ontario

Compliance and Responsible Care auditor of two chemical manufacturing operations (plastics) in Alberta and Ontario. Each audit was focused on

risks associated with air emissions and consisted of a team of 2 auditors for 8 days.

Chemical Manufacturer, Ontario

EHS auditor of a chemical manufacturer in Ontario for an audit which included providing assistance and coaching to internal auditors new to Canadian regulatory requirements and new auditors.

Coatings Manufacturer, Manitoba

Conducted an environmental audit for regulatory compliance and company standards with an international audit team.

Carbon Black Facilities, Ontario

Conducted environmental and health and safety audits at several carbon black facilities in Ontario.

Power

Coal Fired Power Plant, Ontario

Auditor on an ISO 14001 and 18001 management systems verification audit at a coal fired power plant. Specific focus area included waste management and air emissions.

Power Generation Facilities, Ontario

Lead Systems auditor as well as auditor of several power generating facilities across Ontario, for ISO 14001 management systems audits. One of the audits performed was an integrated environmental and health and safety compliance audit, which used a sampling approach to assess multiple locations and objectives in a weeks' time.

Hydroelectric Dam, Surimane

Lead assessing the environmental liabilities and risk associated with a transaction for a jointly government and privately owned hydroelectric dam. The transaction was part of a larger assessment, which included port activities, mines, and refineries in contemplation of a change in ownership of these assets.

Glenn Keays, MSc, EP-EMSLA

Technical Director

Glenn Keays is a Technical Director with ERM Canada's Montreal office. He is an EHS and sustainability management leader with 30 years' experience within industry and consulting from facility to corporate levels. Glenn has extensive experience in management system development; regulatory compliance; and technical support to EHS risk management in the natural resource sector. He has conducted over 500 EHS regulatory compliance and management system audits, and cultural diagnostics. He currently leads ERM's Auditing Technical Community Subgroup on Knowledge Sharing and Engagement with a focus on internal training and mentorship.



Experience: 30 years' experience in mining, oil and gas, chemicals, forest products and consumer products sectors

Email: glenn.keays@erm.com

LinkedIn: https://www.linkedin.com/in/glenn-keays-a4b24310

Education

- MSc, Biology, University of New Brunswick, Canada, 1987
- BSc, Biology, University of New Brunswick, Canada, 1984

Professional Affiliations and Registrations

- Environmental Management Systems Lead Auditor - EP(EMSLA), with specialization in Sustainable Forestry Management
- Certified Lead Auditor, Mining SME and Transportation Auditor, International Cyanide Management Institute
- Board of Directors, Auditing Association of Canada
- Member, Environmental Auditor Certification Subcommittee, ECO Canada
- Advisor on environmental management curriculum development, University of Fredericton

Languages

English, native speaker

Fields of Competence

- Corporate level HSE / Sustainability leader
- Experienced facilitator / trainer / public speaker
- Certified environment / safety / regulatory compliance / sustainability auditor
- Audit program development / auditor training
- Carbon sinks / offset project development
- Supply chain certification and sustainability

Key Industry Sectors

- Mining and Metals
- Oil and Gas
- Chemical and Agrichemical
- Forest Products
- Power
- Food and Beverage
- Transportation



Key Projects

Cyanide Code Recertification

Lead Auditor and Mining SME for International Cyanide Code recertification audits of Nevada Gold Mine's Goldstrike and Cortez mining operations in northern Nevada.

Cyanide Code Recertification

Mining SME and Auditor of International Cyanide Code recertification audit of Barrick Hemlo mining operation in northern Ontario.

IRMA Standards Assessment

Project Manager and Technical Lead on assessment of Initiative for Responsible Mining Assurance (IRMA) Standard against requirements of Mining Association of Canada's Towards Sustainable Mining Program, Performance Standards of International Council of Mining and Metals, and Environment and Social Performance Standards of the International Finance Corporation.

Environmental Compliance Audits, Potash Mining Operations, Canada

Audit team member of regulatory compliance audits of active and inactive potash mining operations in Canada.

Global EHS Assurance Program

Audit team member (2011 to present) and quality assurance manager for EHS assurance audits conducted at open pit coal mines, base metal mines, and integrated smelters throughout North and South America The assurance programs has assisted the client develop a risk profile across all assets and identify companywide improvement programs.

Safety Compliance Audit, Coal Mine Rehabilitation. British Columbia

Lead auditor of health and safety compliance audit of contractor operations underway to reopen a coal mining operation in northern BC.

Safety Transformation Services, Oil Sands Mining Operations

Senior Project Manager of safety intervention and transformation services to support the achievement of a step-change in safety performance at an oil sands mining operation in Fort McMurray, Alberta. Work included diagnostic assessment, training and field coaching to enhance the quality of safety leadership with a particular emphasis on leader's hazard recognition and field engagement skills. Responsible for the management of over 30 ERM safety specialists from across North America that were providing front line diagnostic and coaching within the operations, maintenance, projects and upgrader operations.

Sustainability Standards Review and Development, International Mining Company

Beginning with a gap analysis of the company's existing sustainable development standards, conducted a review of concurrence with external commitments such as TSM, ICMM, IFC, UN Global Compact LEAD, ISO 14001, and OSHAS 18001 to understand gaps. Using the results of this analysis, worked with corporate staff to restructure the SD policies and framework as well as the SD standards to ensure usability at site-level and comprehensive coverage of all commitments.

Cyanide Code Recertification

Lead Auditor of International Cyanide Code recertification audit of Ruby Hill mining operation in northern Nevada.

Cyanide Code Recertification

Lead Auditor of International Cyanide Code recertification audit of Lone Tree and Twin Creeks mining operations in northern Nevada.

Environmental Baseline Reviews, Mining Operation

Audit Team member of environmental baseline reviews of zinc mine located in Vancouver Island, British Columbia. Focus of reviews was to follow-up on material environmental risk issues arising from

due diligence process from recent acquisition of the mining asset.

Safety Transformation Services, Gold Mining Operations

Member of team providing safety intervention and transformation services to gold mining sites in Ontario. Services include hazard recognition and coaching.

Advisory Services – Proposed Canadian Air Quality Management System for Canadian Mining Company

Preparation of background material and facilitation of workshops involving key staff from Canadian mining and refining operations to understand and develop a strategy to respond to the Canadian Federal Government's proposed air quality legislative framework.

Environmental Compliance Audit, Taseko Ltd.

Audit team member of environmental compliance audit of open pit mining, tailings management and milling operations at Gibraltar Mine, Williams Lake, BC.

Towards Sustainable Mining (TSM) Protocol Verification, Teck Coal Ltd.

Completed annual verifications of coal mine operations in British Columbia and Alberta, and metal refining operation in BC, to support the company's mandate to implement the Mining Association of Canada's TSM program.

Corporate EHSC Assurance Program

Technical lead on the development of a corporate assurance program for a Canadian mining company's EHSC program. Focus on establishing accountabilities throughout the organization while supporting combination of self-assessment, audit and external assurance.

Industrial Hygiene Survey of Explosives Storage Facilities in NB and NS

Developed a job hazard analysis / exposure assessment protocol compliant with NIOSH, ACGIH and ERD, and implemented the tool at explosives storage sites in Atlantic Canada.

Process Safety and Regulatory Compliance Audits. Koch Fertilizer Canada ULC

Audit team member of OSHA PSM / CEPA E2 audit of an ammonia fertilizer plant facility in Brandon, MB. A separate audit of EHS regulatory compliance was also completed.

Process Safety Management Assessment of Ammonia and Chlorine Systems in Canada

Project Manager of a study of OSHA PSM equivalent requirements in Canada applicable to the use ammonia and chlorine. The study included federal requirements and those of six provinces in Canada.

Environmental Emergency (E2) Regulations Gap Analysis

Conducted E2 Regulations gap analysis at Trail, BC Metal Refinery operations. Involved detailed site assessment and development of action plan activities.

Environmental Emergency (E2) Regulations Plan Development, Ammonia Refrigeration Systems

Project Manager and Technical Lead for the development of a federally compliant emergency preparedness and response plan for anhydrous ammonia management in the food processing industry.

Chemical Security Planning, Ammonium Nitrate Storage and Handling

Conducted a chemical security threat screening in accordance with US Department of Homeland Security requirements and developed a security and emergency response plan to address requirements of the designated threat level. This included

conducting a mock disaster exercise involving local emergency response organizations.

Focused Risk Assessment, Chemical Industry

Member of internal/external team charged with 'deep-dive' assessments of Responsible Care© Program implementation at Ethylene/Polyethlene manufacturing facilities in Alberta and Ontario. Topics included process safety, occupational safety, industrial hygiene, loss prevention, emergency preparedness and response, and air quality.

OHSAS 18001 Certification Audit – Hazardous Waste Management Company

Prior to ERM, provided contract lead auditor services (over 100 audits) to an accredited certification body. This included OHSAS 18001 certification of a hazardous waste management company involved in offshore waste management support to oil and gas exploration companies.

OHSAS 18001 Internal Audit, LNG Terminal

Lead auditor of internal audit of OHS management system at Canada's only Liquid Natural Gas processing facility. The scope of the audit included offloading, storage, and processing facilities, emergency response and site security.