

Air Quality Profile

Subcategory	Comp. ID	Competency Statement	Importance Type
TECHNICAL COMPETENCIES			
Conducting environmental impact assessments			
	3	Reviews earth and life science systems, functions, inventories and existing studies to determine if sufficient baseline data is available for the impact assessment study.	2
	4	Reviews facility/development design, production/manufacturing processes.	1
	5	Consults with stakeholders (including regulators, municipalities, public, interest groups, indigenous peoples, NGOs, etc.) to gather information regarding the perceived impacts of development activities on communities, the environment and natural resources.	2
	6	Identifies which areas are likely to be significantly impacted either negatively or positively by development activities, e.g. biophysical, economic, social, cultural, and heritage resources.	2
	7	Assesses qualitative and quantitative environmental issues, risks or problems, including their cumulative effect and corresponding economic, social and cultural impacts.	2
	8	Develops mitigation and/or habitat compensation plans, strategies and measures using culturally appropriate approaches.	2
	9	Prepares environmental impact assessment report(s) that may include mitigation, environmental protection, and recovery plans.	2
Conducting environmental site assessments (ESA - Phase 1 and Phase 2)			
	14	Conducts investigation, sampling, screening, and analysis (including geophysical mapping) activities of landforms, soil, ground water, sediments, airborne contaminants, etc., as required.	3
	16	Prepares site assessment report(s) to meet regulatory and other requirements, identifying potential risk and scope of further action by appropriate stakeholders, if necessary.	3
Developing/ Implementing site remediation (Phase 3) plans			
	20	Recommends remediation clean-up targets to make the site fit for its intended use or return it to its original condition (applies to all sites including watershed restoration, forestry site reclamation, mine closures, etc.).	3
	21	Develops site remediation/restoration/reclamation plans and programs, including objectives, targets, contamination description, issue resolution process, pilot requirements, time schedule, and cost estimate.	3
	25	Prepares remediation completion report, including documentation of remediation and post-remediation monitoring data, and review of environmental outcomes relative to standards, for submission to regulators and stakeholders.	3
Developing/ Implementing site restoration/reclamation (Phase 3) plans			
	33	Prepares site restoration and site reclamation report(s) for submission to the appropriate regulators and stakeholders.	3
Interpreting/ enforcing/ complying with environmental regulations and standards			
	34	Provides expert advice and/or testimony to senior management, internal staff, regulatory bodies, interest groups and the public on matters related to disputes, compliance and other environmental issues, including processes for acquiring regulatory approval.	1
	35	Applies environmental legislation regarding issues such as contaminated sites, hazardous materials and waste, pesticide use, storage tanks, etc. to specific applications as appropriate.	1
	36	Defines environmental performance requirements for specific jurisdictions.	2
	37	Prepares regulatory applications.	1

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	38	Prepares permits and operational permit reports (including air permits, waste disposal permits, resource harvesting permits, etc.)	1
	39	Negotiates the terms and approval of compliance procedures and permits, including approval of development plans and use of technology such as Pollution Prevention, Abatement, and Control equipment and systems.	1
	40	Develops plans and programs to meet regulatory requirements, including monitoring programs and employee information and communication plans.	1
	41	Implements programs, including monitoring activities, to ensure regulatory compliance.	1
	42	Evaluates compliance with environmental regulations, including the documentation of violations and non-compliance episodes.	1
	43	Prepares compliance and regulatory reports for internal use and for filing with regulatory agencies.	1
	45	Oversees or participates in audits of the environmental performance of organizations and jurisdictions to determine the adequacy of their policies and procedures, and non-compliance issues.	2
Implementing pollution prevention, abatement & control (PAC) methods			
	46	Assesses operations and processes for potential pollution problems (involves identifying contaminant sources, determining their characteristics and the magnitude of the potential risks).	1
	47	Characterizes the attributes of processes and products generated (for example, chemical/biological composition, toxicity, physical properties and degradability).	1
	48	Evaluates the presence and dispersion of pollutants over large geographic areas using, for example, remote sensing devices such as satellites and aerial photos, regional monitoring devices and government reports, and regulated models.	1
	49	Develops recommendations for the best management practice for pollution prevention, abatement, and control measure(s), including the evaluation of control options versus process changes.	1
	51	Monitors the effectiveness of Pollution Prevention, Abatement, and Control (PAC) solutions, and the performance of installed PAC equipment, systems and technologies.	2
Identifying and mitigating climate change impacts			
	56	Develops greenhouse gas emissions inventories/trading systems to be compatible with the regulatory programs.	2
	57	Tracks air quality and greenhouse gas emissions for purposes such as evaluating, reporting and trading emissions.	2
	58	Develops greenhouse gas emissions/climate change reports.	2
Developing/ Implementing waste management plans and programs			
	69	Analyzes waste streams and volumes to determine the best technology for operations, commercial waste opportunities, and/or waste reduction strategies.	3
Developing environmental sampling, testing and monitoring programs			
	86	Determines the need and scope for sampling program, including environmental indicators, chemicals of concern, and sampling constraints (such as access to sites, fiscal or other limitations).	1
	87	Develops environmental sampling protocols, including data quality objectives, the frequency and timing of sampling, optimum locations for continuous or discrete sampling, data capture systems, sampling procedures, sampling methodology, personnel, and parameter list for analysis.	2

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	88	Develops site-specific work plans, including Quality Assurance/Quality Control (QA/QC) methods, measuring/monitoring procedures and analytical equipment (both field and lab equipment) to be used for the specific application (e.g. air, water, soil, sediments, rock, fauna, flora, human, workplace, etc.).	1
	89	Develops methodologies and protocols for the collection and analysis of qualitative data to complement any quantitative data collected.	2
	91	Maintains analytical test instruments and monitoring or sampling equipment as per manufacturers' user-maintenance specifications and user's standard operating procedures, including calibration of instruments/equipment.	1
Collecting samples and data for environmental purposes			
	92	Determines the appropriate sample size, sampling containers, protocols, preservation methods, collection apparatus and transportation, etc.	1
	93	Selects, assembles and deploys analytical test instruments or sampling equipment (such as data capture systems, continuous monitoring devices, drilling cores, water bailers, etc.), including assembly and documentation of deployment and operational conditions and other pertinent details, such as any deviation to standard procedures.	1
	94	Collects samples and specimens as per established protocol, using more routine sampling procedures and apparatus.	1
	95	Collects samples and specimens as per established protocol, using more complex sampling procedures and apparatus.	2
	96	Uses appropriate techniques to prepare (code, preserve, pretreat and transport) samples for analysis while maintaining chain of custody requirements and sample integrity.	1
	99	Performs direct measurement of physical parameters for air/water/soil, including for example, temperature, flow rates, pressure, gaseous/particulate emissions, etc.	1
	102	Maintains appropriate records and ongoing documentation pertaining to field and laboratory analytical work, including regulatory documentation.	1
Analyzing and interpreting environmental samples and data			
	108	Makes required calculations and estimates including for example, calculation of air quality indices (e.g. daily smog ratings).	2
	109	Conducts statistical analysis of data using appropriate computer software, databases, etc.	2
	110	Assesses the accuracy and precision of analytical results by applying good practice guidance or established QA/QC methods.	2
	111	Interprets analytical data to identify trends, significant changes from historical patterns, deviations, or evidence of environmental stresses, etc.	1
	112	Determines how results will be applied, for example redesigning sampling protocol, redesigning research methodology, developing a baseline dataset, etc.	2
	113	Conducts quality control reviews of data collection, processing, and analysis to ensure data is 'fit for purpose' using accepted scientific practices and proper Quality Assurance/Quality Control (QA/QC) protocols.	2
	114	Prepares summary reports of analysis results using technical formats such as tables, charts, and diagrams for integration into technical reports and/or presentation to expert and/or non-expert audience through scientific journals, oral presentations, etc.	1
Developing environmental policies, measures & standards			
	116	Reviews existing and/or proposed environmental policies/legislation/standards (and the rationale supporting them) to assess implications to stakeholders, including customers and suppliers.	1
	117	Influences environmental policy and legislation by participating in or leading expert level environmental committees and associations.	2

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	118	Consults with experts, including environmental, policy and legislative experts in public, corporate, non governmental organizations (NGO), and governments, regarding new or revised environmental policies and legislation to make recommendations to regulatory authorities.	2
Conducting environmental risk assessments			
	159	Assesses the effectiveness of risk management activities to minimize impact on the environment and human health.	3
Implementing environmental management systems			
	160	Develops an Environmental Management System which is consistent with the organization's strategic plan and regulatory requirements, including goals, objectives, and targets.	3
	161	Implements the Environmental Management System strategies and practices.	3

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Subcategory	Comp. ID	Competency Statement	Proficiency Level
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TRANSFERABLE COMPETENCIES

Professional Ethics and Work Style

1	Maintains good standing in professional associations, practicing professional ethics and remaining current in practice requirements.	High
2	Demonstrates professional, ethical conduct, such as trust, integrity, confidentiality and discretion during the conduct of all work activities.	Exceptional
3	Demonstrates self reliance, motivation and commitment in the conduct of day to day activities.	Exceptional
4	Demonstrates flexibility and creativity in the face of unusual or unexpected circumstances.	Exceptional
5	Cooperates willingly with others in dealing with changing situations, conditions, and expectations.	High
6	Demonstrates attention to detail to ensure the thoroughness and accuracy of work results.	Exceptional
7	Balances the need for 'attention to detail' with a focus on goals and objectives to achieve the desired outcomes.	Exceptional
8	Applies principles of quality assurance and scientific rigour in all work activities.	Exceptional

Learning and Creativity

9	Stays current on the theory and practice pertinent to one's roles and responsibilities.	Exceptional
10	Integrates relevant data and information from a variety of disciplines/sources.	High
11	Continuously pursues personal learning and development opportunities to promote professional growth and development.	High
12	Uses creative approaches to develop innovative ways of working, new designs and technologies, and cost-effective solutions to technical and business challenges.	High

Communicating Effectively

13	Prepares clear, well-formatted reports and other written communications that meet established protocols and are appropriate to the target audience.	Exceptional
14	Communicates clearly and respectfully using verbal and nonverbal language appropriate to the cultural and social context.	High
15	Uses effective interviewing techniques, including appropriate and respectful questioning, clarifying and listening skills, to elicit accurate and complete information.	High
16	Conveys technical information accurately, clearly and concisely, interpreting it appropriately and effectively for the target audience.	Exceptional
17	Uses appropriate content, graphics and format in oral presentations to address the specific needs of target audiences.	High

Collaboration

18	Builds constructive networks inside and outside the organization to facilitate the accomplishment of results.	High
19	Builds strong relationships and trust with team members that make it possible to receive everyone's input and ideas, and maximize individual and team output and potential.	High
20	Works cooperatively with multiple stakeholders, demonstrating willingness to consider alternative approaches or ideas.	High
21	Deals effectively with confrontational situations, demonstrating diplomacy, tact, empathy and consideration for differing points of view.	High

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TRANSFERABLE COMPETENCIES			
Critical Thinking/ Judgement			
	22	Carries out independent primary, secondary and tertiary research to collect sufficient data and information pertinent to the area of inquiry.	High
	23	Performs an objective and thorough analysis of information and data from multiple sources.	High
	24	Distinguishes between facts, inferences and assumptions to establish the quality of the information collected and the reliability of its source.	Exceptional
	25	Employs professional scepticism to assess the objectivity and reliability of assumptions and evidence asserted by a responsible party or client.	High
	26	Makes decisions in a timely manner, committing to a course of action that considers pertinent data, information, options and implications.	High
Planning and Organizing Work and Projects			
	27	Uses ICT (information communication technologies) as appropriate to manage work effectively and increase efficiency.	Moderate
	28	Manages multiple priorities through the selection and application of time and project management tools and approaches.	High
	29	Develops work/project plans, identifying the work to be accomplished, the risk/contingencies that may arise, and how they will be addressed.	High
	30	Coordinates resources (including financial, logistical, supplies, etc.) needed to implement work/project plans and achieve desired results.	High
Leading/ Influencing Others			
	31	Manages the work of others, including project teams, working groups and contractors.	High
	32	Builds consensus and commitment to the team mandate, vision, goals, roles, responsibilities, and processes.	High
	33	Facilitates solutions to barriers that affect individual, team and project performance.	High
	34	Identifies the individual/and or team competencies that are required to accomplish work/project objectives and deliverables.	High
	35	Mentors peers and team members to facilitate their technical competence and on-going professional development.	High
	36	Creates an environment that promotes innovation, creativity and entrepreneurial thinking within the organization.	High
	37	Navigates effectively through political and organizational complexities to avoid or overcome potential barriers to successful completion.	High
Business Acumen			
	38	Analyzes relevant business trends, financial measures, economic factors and new regulations, assessing and articulating their impact on the organization.	Moderate
	39	Recognizes business threats and/or opportunities affecting their area of the business, recommending actions to address them.	Moderate
	40	Identifies clients' stated and underlying needs, and the work activities and methodologies that will best address these needs.	High
	41	Translates the organization's vision and goals into relevant plans and actions, realigning work efforts with changes in organizational direction.	High
	42	Drives the implementation of changes, tracking their impact to ensure organizational performance is improved or sustained.	Moderate