

# Waste Management

September 2016

ID	Competency Statement	Type
<b>CATEGORY A: Environmental and Social Impact Assessment</b>		
<b>SUB-CATEGORY 1: Conducting Environmental and Social Impact Assessments</b>		
1	Ensures that the impact assessment scope, criteria and conditions (geographic, environmental, economic, social, and cultural) are defined adequately.	3
5	Consults with stakeholders to gather information regarding the perceived impacts of development activities on communities, the environment and natural resources.	2
<b>CATEGORY B: Site Assessment (RRR)</b>		
<b>SUB-CATEGORY 2: Conducting Environmental Site Assessments (ESA - Phase 1 and Phase 2)</b>		
10	Identifies the scope of the site assessment (phase 1 and 2) project, including identification of the standards to be followed.	2
11	Reviews historical records for the site (e.g. site plans, fire insurance maps, legal title searches, business directories, air photos, satellite images, etc.) to determine previous land use.	3
14	Conducts investigation, sampling, screening, and analysis (including geophysical mapping) activities of landforms, soil, ground water, sediments, airborne contaminants, etc., as required.	3
<b>SUB-CATEGORY 3: Developing/Implementing Site Remediation (Phase 3) Plans</b>		
19	Evaluates possible remediation/restoration/reclamation alternatives, taking into account costs, technological constraints, characteristics of the contaminant, characteristics of the affected land, and stakeholders' concerns.	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
22	Conducts pilot tests, including treatability studies, to assess the effectiveness of the intended remediation method and/or to advance science and technology.	3
23	Conducts full-scale remediation activities (e.g. thermal, biological, chemical or physical treatment, containment, vapour extraction, excavation, removal of heritage objects, etc.).	3
24	Monitors post-remediation conditions and results to assess if targets and regulatory requirements have been met.	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

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<b>CATEGORY C: Regulatory &amp; Enforcement</b>		
<b>SUB-CATEGORY 5: Interpreting/Enforcing/Complying with Environmental Regulations and Environmental or Sustainability Standards</b>		
34	Provides advice and/or testimony to sr. management, internal staff, regulatory bodies, interest groups and the public regarding environmental regulations and environmental or sustainability standards' issues.	2
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 and/or sustainability performance requirements for specific jurisdictions.	2
37	Prepares regulatory applications.	3
38	Prepares permits and operational permit reports (including air permits, waste disposal permits, resource harvesting permits, etc.).	3
40	Develops plans and programs to meet environmental regulatory requirements and/or environmental and sustainability standards.	2
41	Implements programs, including monitoring activities, to ensure regulatory compliance and standards conformance.	1
42	Evaluates compliance with environmental regulations and conformance to environmental and sustainability standards.	1
43	Prepares compliance and regulatory reports for internal use and for filing with regulatory or reporting agencies.	1
44	Enforces regulations pertaining to the environment and natural resources, including inspecting sites, patrolling, and issuing warnings.	3
45	Oversees or participates in audits of the environmental and/or sustainability performance to determine adequacy of procedures and non-compliance/conformance issues.	2
<b>CATEGORY D: Pollution Prevention, Abatement, &amp; Control</b>		
<b>SUB-CATEGORY 6: Implementing Pollution Prevention, Abatement &amp; Control (PAC) Methods</b>		
46	Assesses operations and processes for potential pollution problems (involves identifying contaminant sources, determining their characteristics and the magnitude of the potential risks).	3

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<b>CATEGORY F: Waste Management</b>		
<b>SUB-CATEGORY 8: Developing/Implementing Waste Management Plans and Programs</b>		
59	Assesses the effectiveness and applicability of waste management programs and technologies to identify, for example, appropriate waste management solutions.	1
60	Identifies optimum methods for the segregation and physical handling of materials at waste management facilities and/or in landfills.	1
62	Develops waste management plans, including waste reduction programs, that address the needs of specific industries, organizations, departments, institutions, etc. and incorporate applicable regulations, such as Workplace Hazardous Materials Information System (WHMIS), Transportation of Dangerous Goods (TDG), Workplace Health and Public Safety Programme (WHPSP), and Atmospheric Environment Program (AEP).	2
63	Develops waste management strategies, taking economics and the life cycle of the product or service into consideration.	2
64	Assesses the cumulative effects and performance of waste management strategies.	1
65	Conducts audits of waste management facilities to assess their adequacy to process waste and meet corporate and regulatory standards.	1
66	Implements programs for the management of hazardous and non-hazardous wastes, including: handling, storage, collection, transportation, treatment, disposal (regarding all types of residential, municipal, commercial, and industrial wastes, including agricultural waste, forest harvesting debris, etc.).	1
67	Ensures regulatory requirements are met in the collection, transport, storage and disposal of hazardous wastes.	1
68	Implements reduce, reuse, recycle programs (e.g. using alternative processes, composting, waste-to energy programs, re-using harvesting debris, spreading manure, etc.).	1
69	Analyzes waste streams and volumes to determine the best technology for operations, commercial waste opportunities, and/or waste reduction strategies.	3
<b>SUB-CATEGORY 9: Monitoring Waste Application/Disposal/Reduction Programs and Activities</b>		
70	Determines requirements of new/improved waste disposal, treatment and recycling systems (e.g. waste volumes, types and methods of treatment).	1
71	Characterizes waste and waste streams.	1
72	Monitors (potential) emissions and discharges of waste disposal sites for their effects on surrounding air, water and soils (including for example sanitary landfills, hazardous waste disposal sites, etc.).	3

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74	Tracks waste generation: source, volume, type, location, storage, transportation and disposal.	1
75	Conducts waste audits to determine, for example, if waste is properly identified and managed, and if material being disposed conforms with permitted use of the disposal facility/site.	1
<b>CATEGORY H: Environmental Sampling &amp; Analytical Work</b>		
<b>SUB-CATEGORY 11: Developing Environmental Sampling, Testing and Monitoring Programs</b>		
86	Determines the need and scope for sampling program, including environmental indicators, chemicals of concern, and sampling constraints	3
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.	3
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.).	3
89	Develops methodologies and protocols for the collection and analysis of qualitative data to complement any quantitative data collected.	3
90	Modifies existing sampling programs to reflect changing research priorities and/or environmental circumstances.	3
<b>SUB-CATEGORY 12: Collecting Samples and Data for Environmental Purposes</b>		
96	Uses appropriate techniques to prepare (code, preserve, pretreat and transport) samples for analysis while maintaining chain of custody requirements and sample integrity.	2
102	Maintains appropriate records and ongoing documentation pertaining to field and laboratory analytical work, including regulatory documentation.	1
<b>SUB-CATEGORY 13: Analyzing and Interpreting Environmental Samples and Data</b>		
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.	3